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ORIGINAL LECTURES.

PAINFUL MICTURITION IN INFANTS, AND NOCTURNAL INCONTINENCE OF URINE; CAUSES AND TREATMENT.

A Clinical Lecture, delivered at the Philadelphia Hospital.

BY JOHN M. KEATING, M.D.,

VISITING OBSTETRICIAN TO, AND LECTURER ON THE DISEASES OF WOMEN, ETC., AT THE PHILADELPHIA HOSPITAL.

(Reported by Harrison Gill, Student of Medicine.)

GENTLEMEN: I bring before you this morning this little boy, whose age is about two years. My attention was called to him the other evening during my visit to the ward. The resident physician, Dr. Peck, informed me that the child was restless, moaning or crying constantly; that it had been in this condition for the last twenty-four hours, and nothing seemed to give it relief. The child did not have loud, screaming attacks, as if it were in acute pain, but at the same time there was something annoying it which gave rise to the condition noticed. Now, let me tell you that the temperature was normal, that the bowels were regular; the lungs were normal, with the exception of very slight bronchitis, which is always more or less present at this time of year.

These symptoms will often present themselves to you, and it becomes a matter of great importance for you to make a diagnosis, in order to be effectual in your treatment. One of the first things that would strike you would be possibly earache; this is of very common occurrence in children, especially during these damp fall months or in the early spring. Some children are very liable to catch cold, to have sore throats, acute tonsillitis and pharyngitis, and when your attention is called to them you will notice redness of the mucous membrane, possibly upon the tonsils, the follicles of which become very much enlarged, with grayish patches in the valleys or depressions of the glands; there are usually present fever, malaise, loss of appetite. Now, this must not be confounded with diphtheria, which is a disease having symptoms very much more prominent as regards their constitutional character, and with the appearance of membrane—that is to say, grayish patches adherent to the mucous membrane of the half arches and soft palate, and very difficult to detach.

In these cases of acute follicular pharyngitis or tonsillitis, the inflammation is apt to extend through the Eustachian tubes and involve the structure of the inner ear, possibly attacking only one, possibly both, and giving rise to a series of symptoms which are most distressing to witness. The child will have a history of ear trouble possibly, or this may be overlooked, but there will be a constant fretfulness, sleeplessness, loss of appetite; the child will continually cry, probably have paroxysms of great pain, in which it will endeavor to bury its head

in the pillow, or will throw itself from its nurse's arms in fear of being touched, or it will place its hand to the place affected, and in this way determine the seat of the lesion; if it is very young, you will have to make a diagnosis by exclusion, and possibly after applying warmth to both ears, giving the child an opiate to relieve its pain, a hot foot-bath as a derivative, you will be rewarded by the child's having a comfortable night's rest, and exhibiting the signs of the discharge from the ear affected upon the flannel or poultice which you placed over it the night before. The child before us gives no indication of aural trouble.

Having eliminated almost every source of trouble, we turn to the urinary organs as the solution of the problem. Retention of urine is very often overlooked in children, and sometimes gives distressing pain. The mother will tell you that the child has passed its water, having possibly left it to the nurse to attend to, and the nurse, in her turn, left it to the mother.

In this case, fearing some such cause, I passed a catheter, but found the bladder empty; but when doing so I noticed that the meatus urinarius was extremely inflamed, the mucous membrane was red and bulging and moist, and the prepuce very long, extremely contracted, and impossible to retract over the gland—in fact, it was adherent firmly to a great extent. The child seemed to suffer extremely as I made this examination, and I felt sure that we had detected the cause of the difficulty. It was placed in a warm hip-bath, was given alkalies freely, large doses of bromide with some chloral, and afterward had a comfortable night.

The cause of the pain seems to be from the fact that children frequently have highly acid urine, due to the presence of uric acid; this, with possibly the small crystals of uric acid, being retained at the mouth of the urethra by the elongated prepuce, excoriates or irritates the mucous membrane. In fact, we have a urethritis established; we have also an inflammation of the mucous membrane of the prepuce itself. This irritation causes erection to take place in the glans through reflex influence, and the child is kept in constant pain until relief is afforded.

Now let me say a few words to you as regards the necessity of the operation of circumcision. My experience, which is quite a large one, enables me to say that if every child, shortly after birth, is taken in hand by a nurse or mother, and the foreskin pressed back, in a very short time it makes no difference how narrow the opening in the foreskin may be, all adhesions will eventually be broken up, and the mucous membrane be loose enough to allow full erection to take place; but, if this is neglected, as the child grows older it becomes very much more painful, and a very much more difficult operation. I believe it is nearly always possible to break up adhesions and to retract the foreskin, but at the same time I think that a child, at the age at which this one is, is placed in a far better condition in after-life by having the redundant foreskin removed and the ad-

hesions entirely broken up. The operation takes but a few minutes. I have never seen it followed by any bad effects, and ether will render it painless.

Now you will ask me, possibly, whether the many nervous troubles of which we read are ever the direct result of preputial adhesions or elongated foreskin. I think I can answer this in a very few words. I have never seen any lesions produced in the nervous system that I could directly trace to this condition; but I have seen phenomena the result of reflex irritation caused by phimosis that simulated serious disorders of the nutritive system, possibly acting through nervous influences. I have seen reflex symptoms of disorders resembling the hysterical phenomena of adults produced time and again, and let me tell you that hysteria is a common thing, even in infants; but the most frequent attendant upon this condition is a disturbance in general nutrition. The child will fail to grow stout and strong, despite all efforts on the part of the mother; nourishment seems to have but little effect upon it; it will fret, be peevish, flabby, and emaciated; the mother will worry, and tell you she thinks her child has worms, or that the milk does not agree with it. If you have satisfied yourself that it gets good food, you will ask whether it passes its water very frequently, and the answer will probably be, "Yes, doctor, baby is always wet." Here, then, you have the source of the trouble, and if you find an elongated prepuce, with a narrow opening excoriated at the end, reddened mucous membrane puckered up, I would advise you not to waste time, but to circumcise. The child will then grow strong and hearty; its flesh will become firm; it will sleep well; the restlessness will disappear; and you will be astonished at the change in its condition.

I shall operate on this child before you. You will notice that I draw the foreskin forward, and that this pair of self-retaining forceps grasps that portion which is in advance of the glans. I allow it to slant toward the dorsum so as not to cut the frænum. I will now take a sharp knife and trim off the projecting tissue, allowing the forceps to remain a few moments so as to permit the blood to coagulate thoroughly. When I take off the forceps and allow the skin to retract you will notice that I have made an annular excision of the skin about on a line with the corona. I will now, with a pair of sharp scissors, split up the mucous membrane on the dorsum and thoroughly retract the prepuce, breaking up adhesions with my thumb, and you will see that I have great difficulty in doing so. Having thoroughly broken up adhesions, I will now unite the edges of the denuded parts by means of a fine needle, using Snowdon's iron-dyed silk and making a continuous suture around the parts, so as thoroughly to approximate the edges. This takes, as you see, but a few minutes; the foreskin should remain retracted, and I very much prefer dressing it with dry dressing, using the borated absorbent cotton on the parts. In the hospital we usually dress these cases with carbolated oil, owing to the danger of suppuration.

While upon this I may speak about these cases of micturition at night. Children will get in the habit of wetting their beds for various reasons; first of all, it may be entirely the fault of the mother or nurse; the child will go to bed early and possibly no attention will be paid to it, and the bladder will become full either

from sudden change in the temperature or an unusual amount of liquid food, or possibly some diuretic substance which it has taken during the day. The child will be in sound sleep and will pass its water; now this usually will be followed by a scolding, and the little sufferer, fearing a repetition of the offence and its consequences, will have it on its mind the next night on retiring, and, owing to the mental effect through reflex control, will contract the bladder at the same time.

Children are creatures of habit to a very marked extent; as we all know, the natural tendency in nature to perform its operations at certain definite periods soon makes it impossible for the child to control itself; the more it is scolded the more its mind will, during sleep, dwell upon this condition. Such cases should not be treated in a harsh manner, but by endeavoring, if possible, to change the hour of this function. If it takes place at nine or ten o'clock, the mother should invariably at that time lift the little one out of bed and put it on its chamber.

Unconscious micturition may again be caused by some local irritation. Constipation is a frequent cause, also worms, especially seat worms, preputial adhesions, eczema, etc.; each of these, of course, has its individual remedy. Then again, sometimes, indigestion will produce it; cerebral excitement, dreams, chilling of the body in the early morning hours with a resultant checking of the perspiration, also irritation of the bladder from over-acid urine or deposits of phosphates or oxalates; these should have their appropriate treatment. When nervous irritability or loss of control or irritation of the neck of the bladder is the cause, the child should be placed upon doses of belladonna, or bromides and chloral at night, or possibly give the belladonna in the mixture at bedtime, or belladonna in form of tincture, one or two drops twice or three times daily or oftener for a child two years old as indicated; frequently a suppository of quinine with belladonna is very useful at night upon retiring. The child, under such circumstances, should be placed upon a tonic during the daytime. The tonic that I usually advise in such cases is: wine of pepsin with Fowler's solution, or wine of iron with tincture of nuxvomica, the former given after meals or a little before. The child should be kept out of doors, have nourishing food, and be well sponged twice a day with cold water and thoroughly rubbed in order to invigorate the system, which is evidently lowered in its tone.

ORIGINAL ARTICLES.

TWO CASES OF OPERATION FOR PYLORIC STENOSIS.¹

BY CHARLES MCBURNEY, M.D.,
OF NEW YORK.

It is not my intention to review or compare the different operations which have been devised for the relief of pyloric stenosis. I desire merely to present the results of my experience with the most recent of these operations. I refer to that devised by Professor Loreta, of Bologna, namely, digital division of the pylorus. This operation is intended to take the place of excision of the pylorus, and is, of course,

¹ Read before the New York Surgical Society, Dec. 22, 1885.

applicable only to cases where the stenosis is due to cicatrization or chronic thickening of a non-malignant character. That such cases exist has been abundantly proven, and the records of pylorotomy, duodenostomy, and gastro-enterostomy all contain cases of this comparatively simple nature.

The operation of digital division was first performed by Loreta on September 14, 1882, and with success. The patient suffered from dilatation of the stomach due to stenosis of the pylorus. The stenosis was believed to be due to the cicatrization of an old ulcer. (I derive my information on many points referred to in this paper from a translation of Loreta's article by Dr. Ancona, which is to be found in the *Arch. Gén. de Méd.* for September of this year, and from an interesting article on the same topic which may be found in the *British Medical Journal* for February 21, of this year. The latter is by Mr. Holmes. And in the *American Journal of the Medical Sciences* for April, 1885, is an article by Professor Randolph Winslow, in which the whole subject of pyloric stenosis is very carefully dealt with.)

The method of operating may be briefly described thus: Incision of the abdominal wall to the extent of about five inches on the right side, close to and parallel with the free border of the ribs. Opening of the stomach by a wound three inches long very near the pylorus, and about midway between the two curvatures. The introduction of one index finger through the pylorus, then the introduction of the other index finger, and finally the gradual forcible dilatation of the orifice to the extent of about three inches. Then immediate closure of the stomach and abdominal wounds. The probable immunity from hemorrhage, the short duration of the operation, and the excellent results which are reported as having followed the practice, would certainly seem strongly to recommend its adoption in suitable cases. I find it impossible to present anything like an accurate statement of the results of all the cases thus far operated upon by this method.

Winslow, in the article already referred to, summarizes the number of operations up to April of this year as six. Four of these were done by Loreta and two others by different Italian surgeons. Of these six cases, two died, but no mention is made of autopsy. The others were all successful. In Ancona's article the statement is made that Loreta claims to have performed the operation twenty-two times and *always* with success. Also that five other Italian surgeons have done the same operation successfully. It is difficult to reconcile these different statements, and I am not able to verify them, as many of the cases have not been published. It is doubtless true, however, that so far the operation of digital dilatation of the pylorus has been very successful, and the mortality low as compared with any other operation having the same object in view.

CASE I.—Marie B. Propes, aged thirty-nine, married, Virginian, was first seen by me in the early part of the present year. She had then been for some months under the care of Dr. F. P. Kinnicutt, at St. Luke's Hospital, who had carefully noted her symptoms and diagnosticated dilatation of the stomach due to stenosis of the pyloric orifice.

The patient gave the following history: From twenty years of age up to a year ago she suffered from attacks of what she called "bilious colic." These attacks occurred every few weeks, and were characterized by intense pain in the epigastrium extending to the back and by violent vomiting without blood. About one year ago she began to have frequent attacks of vomiting, these occurring sometimes twice a day, sometimes only once in two or three days. Nearly all food was vomited, and intense burning pain was felt in the epigastrium with continual thirst. For some five months the patient had been confined to bed, and had become very weak and emaciated. For seven or eight years before this period her weight had averaged two hundred pounds. Half of this weight had been lost within one year. Flatulence, eructations of gas, and obstinate constipation had been prominent symptoms for many months. No pulmonary or cardiac symptoms existed.

On admission to the hospital on February 4, 1885, the patient weighed less than one hundred pounds. The localized distention of the abdomen extended from just below the ensiform cartilage to a point three inches below the umbilicus, and to a point three inches to the left of the umbilicus, and two inches to the right. Over the whole of this region was marked tympanitic resonance on percussion. After emptying the stomach with a rubber tube, a small movable tumor, about the size of an almond, could be felt on deep pressure, one inch to the right of the median line, and two and one-fourth inches above the umbilicus. The patient was put upon a diet of peptonized milk and beef peptonoids, and the stomach was washed out daily. On each occasion the washing was kept up until the fluid returned was perfectly clear. In spite of this lavage, vomiting occurred almost daily more than a month, and when a little rice had been added to the diet, particles of rice could be found in the washing five days after such a meal. Nevertheless, under this treatment the vomiting gradually subsided and the patient's weight steadily increased. The experiment of discontinuing the washing was then tried, but pain and vomiting almost immediately returned.

In this case, then, there was no history of ulceration. The enormous dilatation of the stomach was easily demonstrated by filling the organ with water, and then emptying it. The existence of obstruction at the pyloric orifice was also shown by the return of undigested food many days after it had been swallowed, and finally a distinct tumor could be felt at the exit of the pylorus. This tumor was believed not to be malignant from the facts that it did not increase in size during months of observation, that there was no true cachexia, and that the patient increased in weight many pounds while under treatment. No doubt she could have been kept alive with careful treatment, including daily washings of the stomach, for an indefinite period. She was anxious, however, to leave the hospital; was too nervous to manipulate the stomach tube herself; and desired some radical operation.

I desire to state here that the whole of the medical treatment of this patient had been conducted by Dr. Kinnicutt, under whose care the patient was, and

who, after consultation, requested me to operate upon the case.

Believing the case to be similar to those reported by Professor Loreta, and in which he obtained such signal success by forcible dilatation of the pyloric orifice, I determined to attempt the same procedure.

On July 3, the patient was put upon a diet of peptonized milk only, to prepare the stomach for operation. On July 6, the day of the operation, the stomach was thoroughly washed out with borax solution at 10 A. M., and again at noon. At 2.15 P. M., irrigation was practised with a solution of salicylic acid 1 part, boric acid 4 parts, and water 1500 parts. Before the second washing the fluid was found to be distinctly acid, and to contain some white material in suspension, which, after settling, left the fluid comparatively clear. The sediment consisted of oil globules, casein, and oval and polygonal epithelial cells. Ether was given at 2.30 P. M. on July 6, 1885, and the operation was conducted as follows: with the immediate assistance of my colleague Dr. Abbe, and in the presence of a number of surgeons and physicians. The surface of the abdomen was thoroughly cleansed. I made an incision about five inches long, from a point one inch below and one and a half inches to the left of the ensiform cartilage, downward to the right, parallel with the border of the ribs. All the tissues down to the peritoneum were divided as rapidly as possible, and all vessels tied. The peritoneum was then incised throughout the whole length of the wound, and the pyloric end of the stomach readily found and drawn out through the wound. No adhesions existed between the pylorus and the liver or pancreas. The small tumor already described was felt at once, and was evidently the thickened wall of the pyloric orifice. The anterior wall of the stomach, nearer the lesser curvature and just to the left of the pylorus, was clasped by two thumb forceps, the blades of which were covered with flannel, and incised to the extent of three inches. The pyloric orifice was easily found, but it was so contracted that I could not, even when using as much force as I dared, pass the first phalanx of my finger through it. It felt very much like the firm os of a normal uterus. For this emergency I had ready a rectal dilator, which seemed to be well suited for a preliminary stretching, having perfectly smooth, rounded blades. This was easily passed through the pylorus, but so great was the tenacity of the hypertrophied wall that it was only after repeated stretchings with this instrument that I was able to get one finger through. I then passed in the index finger of the other hand, and, by forcibly separating the two for some time, stretched the opening to a long diameter of about three inches. It was then perfectly easy, on looking through the wound in the stomach, to inspect the dilated pylorus. A short tear in the mucous membrane was recognized, and a very little dark blood noticed, but no bleeding vessel. The mucous membrane of the stomach was then sewed with a fine silk, continuous suture, a straight, round needle being used. No bleeding worthy of notice had occurred in making the incision in the stomach wall. The serous coat was united by twelve interrupted catgut sutures introduced after Lembert's

method. The peritoneum of the abdominal wound was then sewed with a continuous catgut suture, and deep and superficial catgut sutures were used to close the incision of muscles and skin. Three silver wire supporting sutures, with lead clamps, were used to give additional strength. An antiseptic dressing was applied over all. The operation, from the first incision to the complete closure of the external wound, lasted one hour and eighteen minutes.

The patient bore the operation quite well, and at 6 P. M. her pulse was fairly good. Still the evidences of shock were very noticeable, and from this time on both pulse and respiration rapidly failed. She died six hours after the close of the operation, although every effort was made by the members of the house staff and myself to sustain life.

An autopsy was held in my presence the next day. Excepting the stomach, the various organs were found to be in a healthy condition; the wound in the stomach was found tightly closed, so that on distending the stomach with water not a drop escaped. On opening the stomach it was found to contain some ten or twelve ounces of fluid blood. The mucous membrane of the stomach itself was deeply stained with blood; but no lesion other than the operation wound was to be discovered. The pyloric orifice was widely dilated so as easily to admit three fingers. In the mucous membrane of the pylorus on the posterior surface was a recent longitudinal laceration, about an inch long. This laceration extended through the mucous and submucous coats; otherwise the mucous membrane was normal, and no trace of old or recent ulceration could be found. Entirely surrounding the pylorus was a thickening of firm fibrous or fibrous and muscular tissue, which had doubtless caused the stenosis, and which had formed the small tumor previously described. The duodenum was found to contain a large quantity of blood, and many ounces of blood were found in the small intestine. The peritoneum, except where cut in the course of the operation, was normal. No adhesions existed at any point.

The behavior of the patient after the operation, together with the result of the autopsy, made it very clear that the patient had died of hemorrhage, the blood coming from a vessel involved in the tear of mucous membrane found in the pylorus.

CASE II.—Susan Joyce, aged fifty-two, widow, Irish. The patient was admitted for the first time to St. Luke's Hospital on December 18, 1883. She then gave the following history: from fourteen to nineteen years of age she had occasional hæmatemesis. At the age of nineteen, after a severe exertion, she vomited a large quantity of blood during two days. Twenty years ago the patient vomited black grumous material nearly every day for a year, and always had severe pain in the epigastrium after eating. In the early part of 1881 she vomited a large quantity of blood. She was admitted to the hospital much emaciated, complaining of severe abdominal pain, which was much increased after eating, and which extended to the back and right shoulder. The stomach was found to extend to a point four inches below the umbilicus. After a short stay in the hospital the patient was dis-

charged, to be readmitted on April 9, 1885. Since leaving the hospital she states that she has been living upon milk and stimulants, with a little fish and eggs. She had continued to vomit daily. Usually the vomit had been of a dark green color, sometimes mixed with a little bright blood. Constipation had been extreme, no stool occurring without a cathartic. She had been confined to bed for the last six weeks, and had lost flesh and strength rapidly. The patient was found to be emaciated, anæmic, complaining much of thirst and constipation. Tongue coated, and urine scanty. Slight dulness was found at the right apex, and the patient had a cough and occasional fever and night sweats. The stomach was found to be much dilated, occupying the left umbilical, lumbar, and hypogastric regions, extending two inches below the level of the anterior superior iliac spines. Percussion over this area was resonant, with marked succussion sound. A distinct tumor, about one inch long and one-half inch broad, was felt in the epigastric region two and a half inches above the umbilicus in the median line. This tumor was not movable, and was firm and resistant. With the exception of the apex of the right lung the other organs were normal. The patient was put upon a diet of peptonized milk and beef peptonoids. Her weight at this time was eighty-seven pounds, certainly from thirty to forty pounds less than her normal weight. On April 8 daily lavage of the stomach was begun, the solution used being one of borax, twenty grains to the pint. Under this treatment the patient's weight increased to ninety-nine pounds at the end of June. At this date the capacity of the stomach was 115 ounces.

This patient also had been under the care of Dr. F. P. Kinnicutt, in the medical wards at St. Luke's Hospital, for nearly three months. During that time I examined her, with Dr. Kinnicutt, several times, and we agreed that, doubtless, the original cause of her troubles was ulcer of the stomach, probably situated at or near the pyloric orifice, as indicated by the presence of the small tumors found at that point. It seemed probable, too, that this ulcer had healed, or had become nearly cicatrized, from the absence of hæmatemesis during a long period. The tumor was not believed to be malignant, as it did not increase in size, and as the patient did not present any cachexia, and increased markedly in weight under treatment by lavage. Her case was not a promising one, but there was no reason to believe that her life could be prolonged without surgical assistance, unless she remained a permanent resident of the hospital. I determined, therefore, to make an exploratory operation, and, if possible, relieve the stenosis.

On June 20th, the patient's diet was limited to pancreaticized milk only, to prepare the stomach for operation. On July 6th, the day of operation, the stomach was washed out at 10 A. M., and again at 12.30 P. M. The fluid removed before the second washing was decidedly acid, containing much whitish material in suspension, which did not completely separate. Under the microscope the sediment was found to consist of oil globules, coagulated casein, granular nucleated epithelium, and some mucus.

At 3.30 P. M. the stomach was again washed with

the borosalicylic acid solution. The patient was etherized at 4.30 P. M. I had the kind assistance of my colleague, Dr. Robert Abbe, and, during the operation, all possible antiseptic precautions were used. The abdominal wall was incised in precisely the same manner as in the case first reported. All bleeding was controlled, and then the peritoneum was opened as before. The stomach was easily seized, but I found considerable difficulty in locating the pylorus. It was at last made out to be directed upward and somewhat to the left, its ordinary position being occupied by the dilated pyloric end. The stomach wall was then incised to the extent of two and a half inches, the incision being near the lesser curvature, and close to the apparently thickened pylorus. On opening the stomach an old and apparently healed ulcer was felt and seen directly opposite the incision. This ulcer was about one inch in diameter, and its largely thickened edge formed the tumor which had been felt before the operation. The base of this ulcer was firmly adherent to the pancreas behind, and the contraction of cicatrization had given the stomach an hour-glass form. Even then it was difficult to find the pyloric orifice. After a search of some minutes I found it at the upper border of the ulcer, close to the latter, but not involved in it, and directed upward. The posterior edge of the pylorus had been so firmly drawn by the cicatrization of the ulcer that although it was easy, on lifting the anterior edge, to pass the finger through it, yet when the anterior edge was not so lifted the orifice was completely closed. Had the patient's general condition warranted it, the operation of gastro-enterostomy would, I think, have been the better one; but, on account of her age and general feebleness, I did not think it wise to prolong the operation. I thought that by a thorough stretching of the pylorus I could counteract the stenosis produced by the cicatrized ulcer. When the two index fingers were introduced, the pylorus yielded very readily without tearing, so as to leave the exit from the stomach very free. The two fingers were separated during the stretching about three inches. I then at once sewed the mucous membrane of the stomach with a continuous fine silk suture, using a fine, round needle. The serous surfaces were united with a continuous catgut suture after Lembert's method. The abdominal wound was treated as in the first case, and an antiseptic dressing applied.

The time occupied in this operation, from the commencement of the first incision to its complete closure, was one hour and three minutes. The patient rallied very well from the effects of the operation. She slept comfortably nearly all night, receiving small quantities of brandy and ice, and two small hypodermic injections of morphine. But at the end of twenty-four hours her kidneys had excreted only twelve ounces of urine, which was found to contain two per cent. of albumen. Before the operation the urine had been normal, though scanty. From this time on the kidneys ceased to act, and the patient became gradually weaker, and respiration and heart action failed rapidly. She died thirty and one-half hours after the operation, the cause of death being apparently suppression of urine.

At the post-mortem examination, which was made the next day, the following lesions were discovered: The left kidney was normal in size; the capsule was adherent at different points; a few small cysts were found in the cortex; the cortex was thin, and the whole organ congested and fatty; the right kidney was in a similar condition, and an infarction one-fourth of an inch in diameter existed in it; the upper part of the right lung displayed the lesions of advanced chronic phthisis; the lower part of both lungs were congested and oedematous; recent peritoneal adhesions existed in the immediate neighborhood of the abdominal wound; no escape of fluid from the stomach had occurred, and the wound in the stomach wall was tightly closed; the mucous membrane of the stomach bore plain evidences of chronic gastritis; posteriorly was a large, old ulcer, about one inch in diameter, mostly or entirely cicatrized; the base of this ulcer was firmly adherent to the pancreas, and its edge was much thickened; the pyloric orifice lay immediately next to the right and upper edge of the ulcer; the orifice was widely dilated, and no rupture of mucous membrane existed; the stretching seemed to have accomplished the object without injury to any adjacent part.

It is not always agreeable to listen to the details of unsuccessful cases; but, in relation to new procedures, unsuccessful cases possess a certain value, and I have therefore made these two the subject of my paper. The particular points to which I wish to call attention are the cause of death in the first case, and the manner in which stenosis was produced in the second.

ON METHODS OF TESTING THE DIASTATIC ACTIVITY OF MALT EXTRACTS.

BY R. DORSEY COALE, PH.D.,

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IN a recent number of *THE MEDICAL NEWS* (September 5, 1885), Prof. Wm. L. Dudley, of Cincinnati, has described a method of testing the relative diastatic activity of malt extracts, and has given a table of comparative results obtained by him in thus testing samples of several malt extracts of the most prominent manufacture found in the market.

Inasmuch as extract of malt is at present being very largely prescribed by physicians for its diastatic effect, the question as to the relative diastatic activity of different samples of malt extract, and the best means to be adopted in deciding this question, are by no means unimportant matters to the profession. Now, the results obtained by Prof. Dudley, as given in his table on page 259 of *THE NEWS*, are so utterly at variance with those obtained by myself and by others in a very large number of experiments, conducted at various times for more than a year past, and his method of testing appears to me to be so very untrustworthy, that, in view of the importance of the subject, I do not think his paper should be allowed to pass unquestioned.

In the first place, as to the method of testing adopted. The method employed by Prof. Dudley consists, essentially, in mixing a given quantity of

each extract with equal quantities of starch paste; maintaining the mixture at a temperature of 65° C., and from time to time removing a drop of each mixture and testing it "with iodine solution on a porcelain plate or watch-glass, or in a small vial." This testing is continued from time to time until a drop of the mixture of starch and malt extract remains "nearly colorless" when tested with the iodine solution, which, as Prof. Dudley says, "will complete the action,"—that is, the conversion of the starch by the diastase of the malt extract. The time required for this conversion is noted in each case, and the malt extract valued accordingly, the best, of course, being that which has required the least time for the conversion of the starch.

Now this method of testing with iodine solution may, under proper conditions, answer as a qualitative test of the presence of diastase in a malt extract, but I have fully satisfied myself by a number of very careful experiments that, as a means of quantitative or comparative testing of the diastatic activity of different extracts, it is absolutely worthless, and in the highest degree untrustworthy, and the results obtained by its use are conflicting and contradictory. Moreover, it has been shown by J. Kjeldahl (*Dingler's Polytech. Journ.*, 235, p. 379), that determinations of diastatic action are only of comparative value when the amounts of starch used are considerably in excess of the amount converted by the action of the diastase, and that the iodine reaction does not fail until the formation of sugar ceases, at which point there is no longer such an excess of starch present.

Prof. Dudley quotes Payen as authority for the statement that the action of diastase upon starch "continues only until 51 per cent. of the starch has been converted into a mixture of maltose and dextrine, at which point it ceases until the maltose has been removed." It has, however, been shown by O'Sullivan (*Journ. Chemical Soc.*, 1872), Kjeldahl, and other more recent observers, that this statement of Payen is erroneous, and that a conversion of from 66 to 68 per cent. is easily accomplished by diastase, and that the action does not entirely cease even at this point, but still proceeds, though very slowly, until the starch is entirely converted; and that the presence of maltose has no influence whatever upon diastatic action.

Beyond all question the best method for the comparative testing of the diastatic activity of malt extracts is that which has been generally employed by all observers, and which consists in directly determining the amounts of sugar formed by a given amount of the extracts from a large excess of starch in a given time.

After a good many experiments, to determine the most favorable conditions, I have finally settled upon the following method of procedure as giving the best results, and being the most convenient in practice.

A 5 per cent. solution of the extracts to be tested is made by dissolving 5 grammes of the extract in 100 c.c. of water; 5 c.c. of this solution (containing 0.25 gramme of malt extract) is added to 250 c.c. of 3 per cent. starch paste, formed by adding 30 grammes of Bermuda arrowroot to 1 litre of boiling distilled water, and allowing the mixture to cool.

The various mixtures are then carefully kept at the same temperature of 55° to 60° C., by immersion in the same water-bath, or other suitable means, for thirty minutes. At the end of this time the action of the diastase is stopped, either by raising the temperature to the boiling point, or, better, by the addition of 2 or 3 c.c. of a 10 per cent. solution of caustic soda. The mixtures are then carefully diluted to a given volume, and the amount of sugar in each determined by means of a standard Fehling's solution. The amount of sugar contained in the malt extract added is also determined, which amount is to be deducted from the total amount found after digestion with the starch paste; the remaining amount of sugar is that which has been formed from the starch by the action of the diastase, and the relative amounts found in the several cases represent directly the relative diastatic activity of the several malt extracts.

It is absolutely essential that the starch paste should be prepared as directed above. Bermuda arrowroot is almost the only form of starch obtainable in the market which is not more or less alkaline, and it seems to be almost impossible to remove this alkalinity by washing.

It has recently been shown by Duggan (*Amer. Chem. Journ.*, vol. vii., No. 5) that the amount of sugar formed is only directly proportional to the amount of diastase present when the solution is perfectly neutral; and that the amounts of sugar formed by a given quantity of malt extract from ordinary starch and from arrowroot, under exactly similar circumstances, may differ by as much as 90 per cent.

The use of ordinary hydrant-water in place of distilled water in preparing the starch paste, may, according to Duggan, occasion a difference of 40 per cent. in the amounts of sugar produced.

Of course, the amounts of malt extract and starch paste used may be increased or diminished as desired, but I believe that the quantities given above will be found to be the most convenient in practice, and under no circumstances must the proportion of starch to malt extract be less than that given above (28 : 1). It may even possibly be found that, in some cases, this proportion is too low, and if in any experiment the amount of sugar produced should be found to be equal to one-third of the starch used, the experiment should be repeated with an increased proportion of starch to malt extract.

I have carefully tested, according to the method just described, samples of the first five brands of malt extract given in Prof. Dudley's table, and the results are given in the table below. In order to obtain samples which should, as nearly as possible, represent the quality of the malt extract at present being put upon the market by the several manufacturers, and to obviate any possible deterioration which the extracts might undergo with age, the samples used in my experiments were obtained from a large wholesale house in this city, and were the freshest on hand at the time. As neither the W. S. Merrell Co.'s extract nor Forbes's "Liquor Diastase" could be obtained in Baltimore, samples of these preparations were obtained direct from the manufacturers through the agency of the wholesale house just mentioned.

3*

The following are the results obtained :

Name.	Weight of maltose produced.
Maltine	0.612 gramme.
Forbes's Liquor Diastase	0.407 "
W. S. Merrell Chemical Co.'s Extract of Malt	0.232 "
Trommer's Extract of Malt	0.132 "
Keasbey & Mattison's Extract of Malt	apparently no action.

I had already found, in previous experiments, that the remaining three brands of malt extract mentioned in Prof. Dudley's list, have no diastatic power, and, therefore, did not consider it necessary to include them in these experiments.

It will be seen that my results present certain wide differences from those obtained by Prof. Dudley; notably in the case of Maltine. The figures given above are so completely in accordance with the results obtained by me in very numerous experiments which I have had occasion to make heretofore with this preparation, that I am certain of their correctness, and the very remarkable result obtained by Prof. Dudley ("apparently no action in three hours") can only be accounted for by the supposition that he has used in his experiments a sample of Maltine in which the diastase has been, by heat or otherwise, accidentally destroyed.

It is a perfectly well-known fact, of which any physician can easily satisfy himself in a very few minutes, that Maltine does have a very decided and rapid action upon starch, and Prof. Dudley's statement is in no way a fair one as regards the quality of this preparation as placed upon the market by the manufacturers.

In Prof. Dudley's experiments the proportion of starch to malt extract used (4:1), is far too low; this is shown by the fact that, taking his own statement that "the iodine reaction fails as soon as the saccharification has affected a quarter of the starch" as correct, he has obtained in thirty-nine minutes with his best preparation (Forbes's), a conversion of only one part of maltose to one part of malt extract, whereas in my experiments I have obtained, with the same preparation, more than double this amount of conversion in the same time.

Moreover, since no especial mention is made upon the point, it is probable that Prof. Dudley used in his experiments ordinary alkaline starch, which would still further diminish the amount of maltose formed, and utterly destroy the comparative value of the experiments.

To show how very great an effect the use of ordinary starch has upon the result of these experiments, I have repeated them as before, using in this case, however, starch paste made from ordinary starch and hydrant water, in place of that made from arrowroot and distilled water used above, and 0.5 gramme instead of 0.25 gramme of each of the preparations.

In this case the following results were obtained :

Name.	Weight of maltose produced.
Maltine	0.490 gramme.
W. S. Merrell Chemical Co.'s Extract of Malt	0.217 "
Trommer's Extract of Malt	0.114 "
Forbes's Liquor Diastase	0.113 "

It will be noticed by these results that, not only is the amount of sugar produced very much diminished by the use of ordinary starch, but that the relation existing between the amounts formed by the various preparations is altogether changed. This is most probably due to the fact that the varying amounts of acid contained in the several malt extracts serve to neutralize, more or less completely, the alkalinity of the starch, and according as this neutralization is more or less completely effected, so will a greater or less amount of sugar be produced.

It has been stated above that in neutral solutions, with a large excess of starch, the amount of sugar produced in a given time is directly proportional to the amount of diastase present; to illustrate this, I give the following table of results obtained by Duggan in allowing varying amounts of a 5 per cent. solution of malt extract to act upon starch for thirty minutes at a temperature of 55° C.

c. c. of 5 per cent. solution of malt extract.	Weight of maltose formed.	Weight of maltose per c. c. of malt extract used
1	0.475 gramme.	0.475 gramme.
2	0.937 "	0.469 "
3	1.381 "	0.460 "
5	2.269 "	0.454 "

The figures in the first column give the number of cubic centimetres of 5 per cent. solution of malt extract used in each case; those in the second column give the total amount of maltose produced, while those in the third column show the amount of maltose formed per cubic centimetre of malt extract solution used in each of the experiments, and this amount is seen to be very nearly equal in each of the four experiments; that is, the total amount of maltose produced is very nearly directly proportional to the amount of malt extract used.

The statement which Prof. Dudley makes, that in the case of five extracts which showed practically no diastatic properties, "in two cases as much beer, and in the others an equal amount of molasses, would be of almost, if not quite, as much benefit to the consumer," also deserves some notice.

While it is likely that rather too much importance has been attributed to malt extract as an article of food, the extended experience of Dr. Milner Fothergill and others has shown, beyond all doubt, that its value in this respect is much greater than Prof. Dudley seems to suppose, and his statement quoted above is by no means borne out by experience.

It is proper that I should state, in conclusion, that these experiments have been undertaken solely on account of the importance of the subject to the medical profession and the public, and without the suggestion or knowledge of any manufacturer.

CHEMICAL LABORATORY OF THE UNIVERSITY OF MARYLAND,
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ON THE INCURABILITY OF CERTAIN NERVOUS AFFECTIONS OCCURRING AMONG SYPHILITICS.¹

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THE writing of this paper originated from a conviction in my mind, in the first place, that syphilis

is by many overrated as an etiological factor in nervous diseases, and, in the second place, that when a history of syphilitic infection can be made out, it leads many to give a more favorable prognosis than the real pathological condition warrants.

The first error arises partly from the fact that syphilis, like malaria, is a convenient peg to hang a disease on, but more, I think, because equally important factors in the production of organic nervous diseases, such as alcohol, tobacco, sexual excesses, worry, exposure, etc., are lost sight of; the second error consists in the fact that there occur, among syphilitics, obscure nervous diseases which seem to be, but are not, of a specific nature, and also because some ignore the fact that, while syphilitic growths are tolerably amenable to treatment, the pathological conditions which their presence excites are not so curable. A gumma may be absorbed, but the destruction its pressure has caused, or the vascular changes it has brought about, vanish slowly, if at all. An endarteritis may subside, but the necrotic softening, the vascular occlusion caused, is incurable.

To illustrate my meaning better, some cases from my practice will be briefly cited, which have many features in common. They all had suffered an indubitable specific infection; they all, at a period remote enough to suppose the tertiary stage had been reached, developed alarming nervous symptoms; and they all were submitted to thorough mixed treatment with varying success, but no cure.

Four cases are cerebral, two are cerebro-spinal, and four are spinal.

CASE I. *Recurrent gumma, producing aphasia and epilepsy; cured. Periencephalitis, secondary to the gumma, causing partial right hemiplegia and dementia with tremors; not cured.*—A married business man, thirty-two years of age, consulted me in the winter of 1882 for aphasia and headache. He had contracted syphilis at seventeen, and had always abused alcohol and tobacco.

In the summer of 1880, when thirty, after some weeks of general malaise and dull headache, he had his first epileptic convulsion. A month later he had a second. He was put on treatment (probably specific) by his doctor and remained well for six months, when he had several partial attacks without loss of consciousness. When thirty-one, he noticed a return of headache with thickness of speech, and had another severe convulsion. Again several weeks of mixed treatment apparently cured him, and he stopped taking the medicine. When he consulted me he said that, some days before, left hemiparesis had come on, with a dizzy feeling toward night. In the last few days his speech had become thick, and he had caught himself using wrong words.

I found him rather cachectic, with a stupid tacies and thick speech. His optic nerves were normal, but he had a marked right hemiplegia.

After two weeks of mixed treatment, the headache disappeared, speech was fairly distinct, the weakness of the left side was only to be detected by the dynamometer, and he seldom made aphasic mistakes, except when tired at night. No further improvement took place, and there remained a slight right hemiparesis and a perfectly appreciable degree of de-

¹ A paper read before the Section on Neurology of the New York Academy of Medicine, December 11, 1885.

mentia, shown by dislike and inaptitude for business, inattention to surrounding affairs, disinclination to talk, thick speech, and expressionless facies.

Remarks.—In this case the gummy growth causing the aphasia and epilepsy was cured, while the secondary cerebral destruction and periencephalitis, causing hemiparesis and the dementia, were not affected. It shows the recurrent tendency of such growths and the necessity of prompt, thorough, and continued treatment.

A gummy tumor, itself curable, if overlooked or inefficiently treated, does damage which is incurable. By unrelieved pressure it destroys nervous elements which cannot be replaced, and by constant irritation it excites a meningitis of a low grade which irreparably damages the subjacent nervous substance.

It was once my good fortune to see the brain in a case in which a gummy tumor, causing hemiplegia, epilepsy, and coma, had been removed by thorough mixed treatment. The patient died of nephritis and the depression in the convolutions, formerly occupied by the gumma, was filled by loose, oedematous connective tissue.

CASE II. *Gumma on humerus; cured. Occlusion of (probably) the left lenticulo-optic artery. Partial right hemiplegia and anesthesia. Right hemichorea.*—Mrs. F., thirty years of age, consulted me in the summer of 1881 for a tremulousness of the right side. When twenty-four years of age, she contracted syphilis from her husband. When twenty-seven, while under treatment for syphilis, she had left hemicrania and a rather sudden loss of power in the right arm and leg with numbness, but no loss of consciousness or aphasia. A pretty complete recovery took place under mixed treatment and electricity. After the apoplectic attack she walked and used the right hand, but not for fine work. When she became excited, her whole right side trembled violently. Examination revealed a slight paresis and anesthesia of the right upper and lower extremities, which were warmer than the left, and moist.

After being under observation about a month, she began to complain of pain about the right elbow, first nocturnal and then continuous, but worse in bad weather, followed by numbness and impaired tactile sensibility in the right forearm. Examination revealed a sensitive node on the right humerus under the triceps tendon. Mixed treatment promptly dispelled the node and its attendant phenomena, but had not the slightest effect on the cerebral trouble.

Remarks.—There was in this case probably a syphilitic endarteritis leading to thrombosis, and consequent necrotic softening in the region of the left lenticular nucleus, judging by the hemianesthesia, and transitory slight paralysis followed by hemichorea. This thrombosis, whether syphilitic or not, left an incurable lesion, while the frank gumma on the humerus yielded speedily to specific treatment.

CASE III. *Occlusion of a branch of the left Sylvian artery. Partial right hemiplegia, anesthesia, and aphasia. Hemicrania and petit mal.*—Mr. L., forty years of age, consulted me in the winter of 1882. When thirty-two he contracted syphilis, and besides had had repeated sores and gonorrhœas. Had been

given to sexual excesses. Five months before I saw him there commenced a numbness in the right thumb which invaded the whole hand, and in fifteen or twenty minutes he lost the power of speech. Fifteen days later he had an apoplectic attack. When he recovered and since, he noticed a loss of power in the right hand. His difficulty of speech was variable, and consisted chiefly in a hesitancy. The word "three" annoyed him especially. He had headache and one to ten "dizzy spells" a day.

Examination revealed great weakness of the right face and arm, with anesthesia. The left optic nerve was normal, the right fundus was hidden by a cataract dating from childhood.

Remarks.—In this case there undoubtedly was widespread endarteritis, perhaps most marked in the left internal carotid, with complete occlusion and thrombosis of one of its terminal branches.

The variability of his impairment of speech is an exemplification, in a modified degree, of the so-called intermittent aphasia—supposed by some to be pathognomonic of syphilis. It probably is produced in this way. The centre for speech, we will say, is already anæmic, because of the gradual narrowing of the lumen of its nutrient vessel by specific endarteritis. So long as a strong heart with a high arterial tension is present, enough blood is forced through the narrowed vessels to maintain the nutrition and consequent function of the part. A marked fall of intravascular pressure, however, leaves the part supplied by the narrowed artery almost bloodless, and a consequent suspense of function or aphasia ensues.

CASE IV. *Probable periencephalitis. Headaches, insomnia, loss of memory, hallucinations, impaired speech, tremulousness, epileptiform attacks. Dementia.*—A machinist, thirty-three years of age, consulted me in August 1882. He contracted syphilis when twenty-one. Besides his regular duties he worked hard and late, when he should be resting, at designing and constructing naval engines. For some time he had had headaches, relieved by mixed treatment.

In the year preceding his call on me, he had been excessively annoyed by insomnia, loss of memory of recent events, hesitant speech, and omission of words and letters in writing. He had also noticed a dilatation of the left pupil.

Three months before I saw him his general headaches had returned, and he had become very headstrong and restless.

On examination I found his facies dull, his speech slow, thick, and hesitant. There was slight ptosis of the left eyelid and dilatation of the left pupil, which was sluggish to light. The tongue was protruded slightly to the right and was finely tremulous. A doubtful paresis of the right face was also present. There was a crepitus between the fingers. The knee reflexes were exaggerated. Both optic nerves were blurred. Thorough and persistent mixed treatment availed nothing.

He became more irritable, noises particularly disturbing him. His sleep remained poor and he had hallucinations of sight when his eyes were closed, which amounted at times to terrible visions. He complained much of dull pain behind the ears, in the occiput and back of neck. At times would stagger

and feel dizzy. A subsequent examination of the eyes showed his vision to be $\frac{6}{xxx}$ which, with + 1.5 s., was brought up to $\frac{6}{xx}$. He had an insufficiency of the externi of two degrees for the distance. The left disk was very much blurred, the right only fairly defined.

In the second month of my observation he had two "faint spells" while playing cards. He let the cards fall from his hands; could not talk for an hour; felt weak, and lay down. He dropped things with unusual frequency, forgot friends' names, and did not seem to understand as well as formerly. On his last visit to my office he sat familiarly on my desk.

When away in the country, his letters one day were faultfinding and abusive, the next day repentant and apologetic. They always contained many erasures, omissions of words, incoherent sentences, and much horrible spelling.

Remarks.—In this case there was undoubtedly a diffuse periencephalitis due, probably, both to his close application and syphilis, and he presented an almost perfect example of general paresis.

CASE V. Occlusion of the left lenticulo-optic or terminal branch of the left Sylvian artery. Posterior spinal sclerosis. Partial right hemiplegia and hemianæsthesia. Slight dementia and occasional maniacal attacks. Ataxia.—A teacher, forty-three years of age, consulted me in the spring of 1883. When thirty-three, he had contracted syphilis. When forty-two years of age, serious nervous symptoms developed in the following order: There first appeared a heaviness of the legs and numbness, marked in the feet, slight in the fingers. He noticed an inequality of the pupils, and at times a dimness of vision. Tendon reflex was present at the knees at this time, but was slight. He was sleepless, depressed, and irritable, much worse in bad weather. Later, he had diplopia on looking to the left, and some aching pains in the legs, mid-dorsal region, bladder, and rectum. A short time before I saw him, after a few days of headache, he awoke one morning with a numbness of the right side throughout, with a marked weakness of the right arm and leg. Any misstep caused much vertigo, worse on the left side of the head.

At this time there was a marked right hemiparesis of the face, arm, and leg, and a moderate anæsthesia of the same distribution, with a peculiar scalded feeling in the right finger-tips.

He had no knee reflex, stood well with eyes closed, and his walk was rather kicking and stamping. He talked in a hesitant way, and made some mistakes. His ocular movements were good, although his interni were weak. The outline of his right optic nerve was very much blurred.

He became very morose, uncommunicative, capricious, headstrong, and, his wife says, at times abusive, unnatural, and almost violent. Under vigorous mixed treatment, the hemiplegia almost vanished; the anæsthesia, ataxia, and mental peculiarities remained unchanged.

Remarks.—Prompt treatment in this case probably resolved an endarteritis and prevented any further

destructive processes. The necrosis which had occurred, of course remained. The persistence of mental peculiarities suggested the presence of a slight periencephalitis, which I have no doubt existed. Whether the spinal lesion was anything more than the sclerosis that often goes with periencephalitis, I cannot say; but it must have been much more marked in the posterior columns than elsewhere.

CASE VI. Periencephalitis and disseminated cerebro-spinal lesions. Dementia, tremors, impaired speech, impotence, and irregular paraplegic symptoms. Very marked and precocious arcus senilis.—An artisan, thirty-eight years of age, consulted me in the summer of 1883. For years he had abused alcohol and tobacco. When nineteen, he contracted syphilis. When twenty-eight, he was almost beaten to death by four ruffians. In his thirty-third year, his speech began to get slow and thick, and he suffered much from tinnitus and vertigo. At the same time, he found his legs not as useful as formerly, being weak and uncertain, especially at night. His feet shuffled and dragged, and, when tired, there were pricking sensations below the knees. When thirty-five, complete impotence supervened, preceded by an interval of sexual excitement, during which he had intercourse two or three times each night. Since his thirty-sixth year, he had had precipitate micturition and sometimes an intense desire to pass water, with retention and dribbling. Very seldom, he had pricking pains in the legs and occasional pain across his brow. When thirty-seven, he had a temporary diplopia. His bowels became constipated after his legs failed, he thinks, from lack of exercise.

I found him pale, and with brown macules of large size in various parts of his body. His legs, with exaggerated reflexes and some hyperæsthesia, were strong, but he could not walk without help. His hands were strong, but both were slightly ataxic and hyperæsthetic. There was atrophy of each first interosseous muscle and each hypothenar eminence. The pupils were equal and responsive, there was a very marked arcus senilis, and the optic nerves were normal. The tongue was coarsely fibrillary, the speech thick and slow, and the facies dull. Thorough mixed treatment and entire rest produced no amelioration.

Remarks.—There probably were in this case disseminated cerebro-spinal lesions of the sclerotic type, and it is my opinion that sexual excess, the abuse of alcohol and tobacco, and the shock from his severe beating had as much to do with the production of his disease as the more remote syphilitic infection.

CASE VII. Central myelitis. Paraplegia. Impotence. Blindness. (Tobacco?)—A messenger thirty-eight years old, contracted syphilis when thirty-three. He had always been nervous and had abused tobacco. He never could see very well with the left eye. At thirty-five his sight began to fail, and precipitate micturition, gradually growing worse, began to trouble him. Later, constipation appeared, and one attack of retention of urine. Two months before seeing me, sexual appetite and power left him, and he began to notice a weakness in the legs with stiffness, made worse by walking. He had some sharp shifting pains in the scalp.

His left pupil was dilated, the left optic nerve white and the right paler than normal. He had exaggerated knee-reflexes and his walk was spastic and dragging. There was no ataxia or anaesthesia.

Remarks.—The central myelitis, in this case causing paraplegia and impotence, might have been, but probably was not, dependent on syphilis. The patient was of a nervous temperament and by occupation was much exposed to the weather. The atrophy of his optic nerves causing his impairment of visual power might be accounted for by his abuse of tobacco.

CASE VIII. *Right hemimyelitis. Spastic paralysis of the right leg with perhaps exalted sensibility. Anaesthesia of the right leg, thigh, and side.*—A laborer contracted syphilis when twenty-three. He was hard-working and much exposed to changes of temperature. Four months before he consulted me, when thirty-five, nervous symptoms appeared in both lower extremities but in a different way. On the left side there first appeared a numb, sleepy feeling in the left foot, which in twenty-four hours ran up to about the level of the ribs. There was also a slight weakness of the left leg and a feeling as though the left sole was spongy.

On the right side there was first noticed a loss of power in the leg and a slight, sleepy feeling in the great toe. He thought the right leg stiff, as well as weak. At first he had involuntary defecation and retention of urine, which passed away.

The numbness on the left side later crept a little higher and there developed into a partial cincture feeling in the upper left abdominal region. There was a good deal of spinal trepidation in bed if excited.

His walk was springy on the right leg, and he swung the left. The right knee reflex was exaggerated. There was a partial anaesthesia in the numb areas, but no atrophy on either side.

Treatment availed nothing. The lesion involved principally the right half of the cord, as on the right side the motor and on the left side the sensory functions were most impaired.

Remarks.—The lesion, I surmise, was primarily a hemimyelitis turning into a patch of sclerosis. In its etiology, I think, syphilis played a minor part.

CASE IX. *Chronic atrophy of the cells of the anterior horns of the spinal cord. Rheumatic arthritis. Progressive muscular atrophy. Articular deformities.*—A woman nursing a patient with secondary syphilis contracted the disease at the age of fifty-nine. Four years later she began to have rheumatic pain in the shoulders, later in the elbows, and later still there were soreness and numbness of the hands. Four months before I saw her, a slight swelling commenced on the dorsum of the head of the second metacarpal bone and ulnar deviation of the fingers, and also a falling away of the first interosseous space of the right hand. Soon after, the same changes began in the left hand, and a falling away in the forearms was noticed. The patient had noticed that the wasting had been fibrillary.

When I saw the patient at the age of sixty-four, she had the ordinary deformities of rheumatic arthritis and muscular atrophy, of the progressive

type, chiefly involving regions of both upper extremities.

Remarks.—This woman's hard work and old age entitled her to both rheumatic arthritis and progressive muscular atrophy, independently of the syphilis, which, I think, had nothing to do with either.

CASE X. *Posterior spinal sclerosis. Locomotor ataxia.*—A business man contracted syphilis when twenty-one. He had been overworked when a boy. When thirty-three, he began to complain of numbness and some loss of power in the legs, the left first. At the same time he noticed slowness of micturition and failing virile power.

He consulted me in the winter of 1882, a case of locomotor ataxia—of such a typical nature that it need not be detailed. Anti-syphilitic treatment, of course, was inefficacious. Of the relation between posterior spinal sclerosis and syphilis, more will be said anon.

Of these ten cases, eight were men and two were women. One woman was infected by her husband, one by a patient, one man was innocently infected by a cut on the finger; the rest contracted the disease in the orthodox way.

The average age at infection was twenty-eight years, the earliest was at seventeen, the latest (the nurse) at fifty-nine.

The average period of incubation, supposing the nervous disease to have been tertiary, was nine years; the shortest time being two, the longest fourteen years.

The pathology of these cases is widely different. Two, among other lesions, had frank gummata, which promptly yielded to specific treatment.

Three cases had symptoms and a mental state pointing to a periencephalitis. One abused alcohol and tobacco; one abused alcohol and tobacco and was once nearly beaten to death, and was very degenerate, with an arcus senilis at thirty-eight; and the third was a rather precocious inventor. All might have committed, what to them individually, were sexual excesses. With some scepticism in my mind as to the etiological importance of syphilis in these cases, I am sure it found powerful synergists in alcohol, tobacco, sexual excess, mental strain, etc., or, at any rate, that the periencephalitis is not itself specific, but secondary to a syphilitic lesion, which may have been cured. Periencephalitis from any cause has a bad prognosis, provided we except some cases of transient dementia due to alcohol or the bromides. Periencephalitis in syphilis I do not consider any exception to the rule, and is just as incurable as any.

Dr. Goldsmith, Superintendent of Danvers Asylum, in a very able paper on syphilis and insanity,¹ which I would like to quote at length, says:

"When a patient with symptoms indicating progressive paresis has a previous history of syphilis, I think he is more likely to have paresis without being more likely to recover from it; and in my experience, active treatment by mercury and iodide of potassium usually has a debilitating and injurious effect. The same is true of all

¹ Syphilis and Insanity, by W. B. Goldsmith, M.D., Boston Med. and Surg. Journ., November 5, 1885.

forms of mental disease which are not preceded by severe headaches, paralysis of limited groups of muscles, or localized disorder of sensation—that is, by symptoms indicating a circumscribed new growth. When such symptoms exist, the frequent efficacy of adequate anti-syphilitic treatment is unquestionable, and I have no doubt that mental disease can be averted by its employment."

Three cases had rather sudden hemiplegic symptoms, caused by arterial occlusion or rupture. When this is due to syphilis it depends on an endarteritis obliterans, leading to gradual encroachment on the lumen of the vessel, final thrombosis, and consequent necrotic softening. The frequent apoplectic onset in these cases is explained in the same way as is intermittent aphasia, by a weak heart suddenly failing to force enough blood through the constricted vessels to nourish the part.

Syphilitics are as liable to simple embolism, thrombosis, and hemorrhage, as other patients; and, of course, these conditions must be excluded. However curable the syphilitic endarteritis may be when treated promptly, the acute softening following unrelieved thrombosis, or the subsequent cicatricial changes, are not one whit more curable because syphilis thickened the vascular walls. The destructive process extends, or reparative changes take place, subject to ordinary laws.

Mixed treatment undoubtedly brings about vascular changes that check the morbid process and render a recurrence less likely. In all these cases a partial right hemiplegia and anæsthesia remained, proving the existence of a destructive lesion.

Two cases had spinal, in addition to cerebral, lesions, which in only one case were typical. Case V., in addition to his evident cerebral thrombosis, had probably a sclerosis of the posterior columns of the cord; while Case VII., superadded to a periencephalitis, had a doubtful disseminated sclerosis.

Three cases had spinal lesions only. One had a central myelitis, one progressive muscular atrophy, and one posterior spinal sclerosis. These may be attributed to any one of many causes, as well as syphilis. The question arises, Does rebelliousness to mixed treatment argue at all against the syphilitic origin of lesions? Why expect destructive lesions resulting from vascular disturbance to disappear any sooner because syphilis altered the vessels? Nervous tissue destroyed by disease, be it specific or simple, is rarely regenerated.

The question for us to decide, in preparing to make a prognosis, is: Has a destructive lesion occurred; and, if so, where is it located, and what is its extent? Indications of a destructive lesion should lead one to a cautious prognosis as regards perfect recovery, while the prognosis for life and a moderate amount of health may be good. A gummy intracranial or spinal growth giving rise to alarming symptoms, may vanish, as by magic, upon prompt treatment. The symptoms of these frank, specific growths are, as a general thing, characteristic and widely different from those of the more insidious destructive lesions.

An intracranial gumma often heralds itself by sharp, localized headache, gradually deepening paralysis, aphasia, epilepsy, and optic neuritis; while

destructive lesions are more apt to have diffuse, dull headache, stationary or lessening paralysis, or aphasia, rarely epilepsy or optic neuritis. Intraspinal gummata give rise to a painful paraplegia, while an inflammatory or destructive change gives rise to various and atypical sensory and motor manifestations.

As to the pathology of these cases, I can say but little, as such a discussion opens the whole subject of the pathology of syphilis. This I will say, that, so far as can be told without autopsies, no permanent pathological condition was present in these cases which might not have been brought about by other etiological factors which were often present. The periencephalitis might be caused by alcohol, mental strain, or excesses; the arterial occlusion might be due to precocious disease not specific.

Two pathological conditions present in these cases, I think, are preëminently not of syphilitic origin. I refer to the chronic atrophy of the anterior horns in Case IX., and the posterior spinal sclerosis in Cases V. and X.

Syphilis has enough to bear, but I think it should not be made to shoulder true progressive locomotor ataxia. The late lesions of syphilis are focal or diffuse, not systematic; and, though multiple, are very rarely symmetrical. They may implicate one or both sensory tracts at a certain level, giving rise to sensory or ataxic phenomena, but not of the regular locomotor ataxia type; and it is unreasonable to suppose that syphilis will pick out bundles of fibres in the posterior columns and produce in them a symmetrical, equable sclerosis throughout perhaps the whole cord, leaving entirely intact every contiguous structure, and every other part of the cord. Of late, especially, the profession seems to cling tenaciously to the syphilitic etiology of *tabes dorsalis*, ignoring entirely the excesses, exposures, and mental or physical strains so often present. Donkin, in an able paper, says:¹

"Syphilis, that inexhaustible cruse of ætiological oil, may be regarded as having been weighed in the balance of causation and found wanting. Recourse was, doubtless, had to it, with that natural longing for finality and logical rest which characterizes the minds of most of us; but, both on account of the wide prevalence of syphilis and the known habit of its morbid deposits, *which do not make choice of functional tracts*, its supposed causative rôle in locomotor ataxia cannot be at all satisfactory to the serious inquirer. The suggestion, in order to remove a difficulty from the syphilitic theory, that the morbid process may have been first diffused over the cord, and afterwards become localized in the posterior columns; is somewhat gratuitous, and certainly quite out of accord with the clinical history of most cases of ataxy.

"But, though the origin of this disease is confessedly obscure, there would appear to be some points of probability in the older notion, that it may lie in what is, to the affected individual, relatively excessive sexual excitement."

These remarks seem to me extremely sensible, and come to my mind with great weight. Leaving theoretical discussions aside, a study of the foregoing

¹ Suggestions as to the Etiology of some of the So-called Systematic Diseases of the Spinal Cord, by H. Donkin, M.B., F.R.C.P. *The Brain*, Jan. 1883.

cases emphasizes the fact that treatment of nervous affections among syphilitics must be prompt and persistent to be successful, as postponed or spasmodic treatment often allows irremediable destruction to take place. With this fact in mind, can we say to ourselves that we protect syphilitics as well as we should against grave nervous diseases?

My opinion is that it is the duty of physicians to warn every syphilitic patient of the danger he is in of developing at any time grave nervous symptoms. We should tell him that, on the appearance of headache, neuralgia, ocular disturbances, troubles of speech, vertigo, unusual sleepiness or insomnia, transitory or trifling paralysis, tremors, fits, weakness or numbness of the legs, sexual excitement, or impairment or troubles with bladder or rectum, he should at once consult a physician, and call his attention particularly to the syphilitic history.

TWO CASES OF RENAL SURGERY.¹

DOUBLE NEPHROTOMY: ON ONE SIDE FOR PYONEPHROSIS AND CALCULUS; ON THE OTHER, FOR ACUTE OBSTRUCTION OF THE URETER.

NEPHRECTOMY FOR PYONEPHROTIC KIDNEY: IMPROVEMENT.

BY F. LANGE, M.D.,
OF NEW YORK.

CASE I.—About the middle of September of this year I was called in consultation by Dr. Neumer, of this city, to see a Mr. T., thirty years of age, who pretended to have suffered from urinary trouble since his twelfth year, to have had pus in his urine all the time since, which has become most abundant during the past three or four weeks, while at the same time pain and frequency of urinating have become intolerable. An examination under chloroform, which had to be administered on account of the excessive irritability of the patient, showed no stone in the bladder. A round, resistant, immovable tumor, about the size of the head of a newborn child, was felt in the region of the left kidney; the right kidney could likewise be distinctly felt, hence was dislocated downward, but did not seem to be enlarged to any considerable degree. The pain was located almost exclusively in the left side and in the pendulous portion of the penis. Urine contains a large quantity of pus. Microscopically, nothing but pus-cells, no blood, no cylinders.

Simple pyonephrosis on the left side was diagnosed. The absence of blood in the urine, and of symptoms that might have pointed to an obstruction at any time, spoke against stone. The other kidney was apparently not healthy either; probably chronic pyelitis and interstitial nephritis existing there.

Simple nephrotomy on the left side was performed on the 2d of October. Lumbar longitudinal incision. In the region of the perinephritic fat a hard, resistant, fibrous mass was encountered, the wall of the pyonephrotic sac. After having cautiously penetrated through it I struck stone, and removed, after a tedious digging of about an hour and half, quite a

considerable quantity of irregular shaded calculi, which apparently were scattered in all directions through the recesses of the calices. They were mostly, with their irregular edges, embedded so deep into the tissue that their removal was impossible without some bleeding and injury to the tissues. Mostly thin partition walls had to be broken by means of the finger and instruments in order to get at a new nest of stones. Though finally I did not feel any more stones, I had a moral conviction that there were more, but I desisted from further proceeding on account of the weakness of the patient. Drainage, frequent antiseptic irrigation with warm borosalicylic acid, small doses of morphia. The patient after about six weeks was discharged in a very much improved general condition. The pus from the urine had diminished very promptly, without disappearing entirely. The discharge from the now existing pyonephrotic fistula was moderate, apparently very little admixture of urine. The palpable tumor had considerably diminished in size.

Now comes the most interesting episode in the history of this remarkable case:

About the 25th of November the patient commenced to complain of pain in the abdomen. His bowels became obstinately constipated, and a few days later the urine was remarkably scanty. On the 28th the patient was reported to be very sick. Being unable to visit him on account of other engagements, I asked, in the absence of the family physician, another colleague to attend him, who sent me word that the man had general peritonitis. He had also tried to empty his bladder, because for almost twenty-four hours no urine had been passed, but had only withdrawn a few drops.

In seeing the patient on the morning of the 29th, I found the man with a tympanitic, very painful abdomen. The principal pain, however, was located in the right side, while the first operation had been done on the left. His pulse was weak, dyspnoea, beginning collapse; not a drop of urine in the bladder. I diagnosticated occlusion of the right ureter, and proceeded to operate at once, after the patient had been transferred to my institution. In first exploring the left side, because of the idea that eventually some inflammatory process might have proceeded across to the other side from the kidney originally operated upon, I again found stones, and after some searching removed a considerable quantity.

I then did lumbar incision on the right side, having placed the patient on his belly with slight inclination toward the side of the operation, as recommended by me before for exploratory incision of the pelvis of the kidney, found all the connective tissue under the quadratus lumborum infiltrated with watery fluid, resembling urinary infiltration; removed the fat from the rear aspect of the kidney and found in its substance, and quite near the insertion of the pelvis, an abscess, which seemed about to perforate. After opening it, I passed my finger without resistance into the pelvis and in withdrawing it a great quantity of bloody urine escaped. The pelvis was so much dilated that I was very well able to pass my finger into the first part of the ureter. Lower down, in introducing a slender, long, thin

¹ Read before the New York Surgical Society, Dec. 22, 1885.

bladed dressing forceps, I met with a resistance without having the touch of a stone. I then, by means of a large syringe, injected warm water in the direction of the ureter, when after a few injections this mass emerged; a whitish-gray plug, about the size of the end phalanx of the small finger, somewhat flattened and conical, resistant, but brittle, and apparently consisting of an old fibrinous clot into which watery substance and numerous gravel-like concretions were embedded. I then was able to pass a middle sized bougie directly down into the bladder without any resistance.

There was not inconsiderable venous hemorrhage, which, however, was easily checked by an iodoform gauze tampon after a middle-sized drainage tube had been inserted into the pelvis of the kidney.

On the first day after the operation three quarts of cloudy, slightly bloody urine had been discharged. Almost all the urine seemed to pass by the normal channel, and about one week after the operation the tube was removed. Several pieces of necrotic tissue passed at times with the urine, and in some of them, though they were entirely disintegrated, the outlines of glomeruli and urinary canaliculi could be detected. The patient's general condition has since remarkably improved, and though I do not have any sanguine hopes so far as complete recovery is concerned, I still think that the last operation has saved the patient from imminent destruction. He has now a superficial, healthy-looking, granulating wound on the right side, and a fistula discharging a moderate amount of pus on the left. The fact that during the occlusion of the right ureter no urine was found in the bladder, is conclusive proof that the left kidney has entirely lost its significance as a urine-secreting organ. I should not wonder if it contained still more calculi in some remote diverticulum of the cicatricial sac. The urine now passed has only a very moderate sediment of pus, its quantity is on an average three pints. Appetite very good. Evening temperature about 100°. Four weeks have passed since the operation.

Weight of stones removed, six drachms. About fifty pieces, varying in size from a pea to a hazelnut, besides hundreds of stone granules, consisting of oxalate and phosphate of lime, the latter predominating.

In the above case the presence of stone was a surprise to me, because at no time had there been any symptoms conclusively indicating stone.

In the following case stone had been diagnosed both by me and by other physicians, while the operation taught us differently.

NEPHRECTOMY FOR PYONEPHROTIC KIDNEY: IMPROVEMENT.

Mrs. R., twenty-six years of age, married for a little more than three years and healthy, though somewhat delicate, until her present disease, gives a good family history. Menstruation appeared at her fifteenth year, and has always been regular except during two pregnancies in the first and second years of her married life. She dated her present disease from February, 1880, when, after a severe cold, bladder trouble set in, which was taken for and

treated as cystitis, and became rather severe in the summer of the same year, at which time not infrequently a bloody discharge appeared with the urine, often in large clots and with free admixture of mucus. Gradually pain and discomfort became somewhat less without disappearing entirely. In 1881 the patient was treated by turpentine internally for about nine months. Besides that, she has taken all imaginable waters which are usually prescribed for these troubles. The patient was married in September, 1882, and became severely ill soon after, suffering excruciating pain until, after a protracted retention of urine, a large piece of flesh, as she says as large as a small fist, was discharged, and at last extracted from the bladder by herself, after which improvement of the general condition took place. Bloody admixture in urine, however, remained, which sometimes has been very free. Eleven months after marriage her first child was born. About twelve days later she commenced to suffer from severe pain in the lumbar region, which lasted for about three weeks, and was principally located, as the patient remembers, on her right side. Then followed a comparatively free interval until, about four months later. During the first four months of her second pregnancy similar pains set in, mostly in the right lumbar region, radiating toward the right knee. Often when she tried to get up after such an attack of pain, she had a feeling as though her legs were paralyzed, and as though she must raise them with her hands to put them into motion. Toward the end of her pregnancy she suffered again, less but very severely, also a short time after the delivery, when a similar attack to that after the first delivery occurred, and was of several weeks' duration. From January, 1885, until the following summer she was confined to bed, became gradually weaker, and was never without pain, while her urine was always more or less bloody and cloudy. During the months from July to October, during her stay in the country, she improved under liberal milk diet, to become worse again when she returned to the city. Throughout the last five years there seems never to have been normal function of the bladder, and never normal urine, almost always admixture of more or less blood, mucus, or pus. Her health has gradually failed, and when I saw her first in October, she presented in her extreme emaciation, nervousness, and irritability, a really miserable picture.

Under chloroform one was able to palpate both of her kidneys; they seemed to be about normal size, but were located a little lower down than normal. Examination of bladder negative. A moderate amount of sediment in the sometimes pale and watery at other times bloody urine. Microscopically, a great many epithelial cells from the bladder, pus, and red blood corpuscles. Specific gravity after about eight days of observation varying between 1011 and 1021. Quantity, a pint and a half to three pints. Once a piece of a granulated cylinder was detected. Very severe pain at intervals, located principally in the right lumbar region. Also dysuria. Patient reports that exercise markedly increases pain and amount of bloody admixture. At times pain is said to be quite intolerable. She also mentions that at

times, during severe attacks of pain, urine of more normal quality has been discharged.

Lumbar incision on the 26th of November, in belly posture. Ureter laid bare and opened. Difficulty in finding lumen, which seemed to be partly obliterated. A fine probe could be passed to the distance only of about one and a half inches. Pelvis of kidney hardly noticeable. Seems to have shrunk. Fatty tissue intimately adherent. Surface of kidney laid bare. The whole organ seems to be cystic. Some of the cysts punctured contain watery fluid, others a flocculent pus. The whole organ seeming degenerated and worthless, was removed. Adhesions on upper and lower end separated by actual cautery. Silk ligature in three portions around pedicle. Very insignificant loss of blood. No bad symptoms during or after the operation. After four weeks patient was discharged much relieved from pain and suffering; somewhat improved constitutionally. Urine with some change for the better, inasmuch as amount of pus and blood has been less, the latter for some time disappearing entirely. Bladder symptoms varying; as a whole, improved. There is no doubt that the remaining kidney is also in an abnormal condition, and the outlook for ultimate recovery is by no means flattering. At times the patient complains of a severe pain over the right iliac fossa and is extremely sensitive to pressure. From the condition of the ureter near the pelvis of the kidney, I should judge that an ulcerative process, leading to obliteration, must have taken place in its upper portion.

The removed kidney, which was of normal size and shape, shows almost no cortical substance, and consists of a large number of cystic cavities with smooth walls, mostly filled with pus, and varying in size from that of a hazelnut to that of a large walnut. Microscopically, the elements of the kidney are preserved in the remainder of cortical substance. I must say that the quality of the pus suggested to me that the nature of the process might be tubercular, though nowhere could cheesy deposits or infiltrations be found. I shall cause a more complete microscopic examination to be made.

MEDICAL PROGRESS.

CUTANEOUS AFFECTIONS IN GONORRHOEA.—In the *Revue de Médecine*, M. GILBERT MALLET invites renewed attention to the eruptions met with in the course of gonorrhoea. Carefully excluding all cutaneous eruptions that may be due to errors in diet or the administration of cubebs or copaiba, he classifies the remainder in three divisions: (1) Eruption closely resembling scarlet fever or measles; (2) rashes which may be described as those of "polymorphic erythema;" (3) purpuric patches. He produces evidence which suggests a probable relation of cause and effect between gonorrhoea and the eruptions of the first group. They come on, for the most part, late in the stage of the decline of gonorrhoea, last about twenty-four hours, and are followed by furfuraceous desquamation; they are often associated with severe gastro-intestinal disturbance, and can hardly, at first, be distinguished from the rash of

measles or scarlatina. The second group is distinguished from the copaiba rash by (1) absence of the itching often present in that affection, (2) by the knotty appearance of the erythema, and (3) by the appearance of successive crops of eruption. The evidence in favor of the outbreak of purpuric patches does not seem so satisfactory. Some of the cases are probably those of peliosis rheumatica occurring in patients suffering from gonorrhoeal arthritis. M. Mallet rejects the reflex and pyæmic theories of the origin of gonorrhoeal rheumatism and the cutaneous manifestations, and argues strongly in favor of the absorption of a specific gonorrhoeal virus.—*Weekly Medical Review*, December 26, 1885.

THERAPEUTIC USES OF SNEEZING.—The *St. Louis Medical and Surgical Journal* quotes COIFFIER, who says in a recent work, "if an expectorant is indicated, and the remedy at hand fails to act as it should, provoke sneezing. A sneeze loosens up the air-passages, and sets the excretories into vigorous action. With children, a pinch of snuff is generally all-sufficient. With their elders, especially those in the habit of taking snuff, the poudre sternutatoire of the codex is better. Veratrine is a powerful provoker of sneezing—one one-hundredth part of a grain added to a half ounce (say 1:25,000) of snuff increases its sternutatory powers immensely. Again, there is nothing like a sneeze in expelling foreign bodies from the air-passages." M. Coiffier gave a number of incidents confirmatory of this axiom. In two instances where he failed to excite sternutation otherwise, he succeeded by conveying to the base of the nasal fossæ a minute portion of veratrine, scarcely the two-hundredth part of a milligramme, which he carried thither on the end of a sound.—*Medical Age*, Dec. 26, 1885.

FATTY ACIDS IN NORMAL AND PATHOLOGICAL URINE.—JAKSCH, of Vienna, records the following results from recent experiments:

1. In normal urine traces of fatty acids are present.
2. In certain pathological conditions the fatty acids are present in relatively considerable amount. Thus, in the total renal excretion of twenty-four hours in fever patients, they are present to the extent of 0.06 gramme to 0.1 gramme, and in hepatogenous lipaciduria from 0.6 gramme to 1 gramme.
3. After the volatile fatty acids of the urine of febrile and hepatic diseases have been removed by oxidation, fatty acids still remain in the proportion found in normal urine; the acids so far found are formic, acetic, and butyric.—*Deutsche med. Woch.*, Dec. 10, 1885.

LIGATION OF PRIMITIVE CAROTID ARTERY.—DR. ARPAL, of Saragossa, described the effect of a suicidal pistol wound behind the right ear, with a furious hemorrhage, necessitating the ligation of the primitive carotid artery of the same side. This was done, an antiseptic dressing applied, and thirty-one days after the operation he was discharged cured, and has for two months pursued his vocation without inconvenience.—*Gaz. Hebdom. des Sciences Méd.*, Dec. 12, 1885.

EXTIRPATION OF THE SPLEEN IN LEUKÆMIA.—RYDYGIER records the removal of a six pound spleen from

a leukæmic woman, aged thirty-one, who died, on the following morning, of hemorrhage from the abdominal wound. The ligatures on the main bloodvessels involved held perfectly, and Rydygier ascribes the secondary hemorrhage to imperfect coagulation dependent upon the condition of the blood. This case brings the total number of deaths from this operation up to eighteen, of which sixteen were from hemorrhage and two from shock. Thus far, the only successful case of splenic extirpation for leukæmia is that performed by Franzolini.—*Centralb. f. d. med. Wiss.*, Nov. 21, 1885.

TARTAR EMETIC IN PHTHISIS.—BUCQUON records the successful employment of tartar emetic in many cases of phthisis. He administers the drug at first in the aggregate daily dose of one and a half to two grains, the patient at the same time not being allowed to use fluid, in order that vomiting may be avoided. When tolerance is established, the aggregate daily dose is reduced to three-quarters of a grain, which, he states, to reduce fever, cough, and expectoration, increase the appetite, and induce a tendency to constipation. The only contraindications for the treatment described, are severe diarrhœa and persistent intestinal ulceration.—*Centralb. f. klin. Med.*, Nov. 28, 1885.

INJECTIONS OF CHARCOAL WATER IN TYPHOID FEVER.—As a method of partially disinfecting the intestinal contents of typhoid patients, and thereby not only rendering the stools inoffensive but also diminishing the danger of auto-infection, DUVAL strongly recommends the use of injections of charcoal water. A soup-ful of poplar charcoal is well mixed with each injection, which is repeated from two to three times daily. A case is cited in which the use of this absorbent rendered the intensely repulsive dejecta absolutely inodorous, and in which great meteorism was immediately diminished and finally disappeared.—*L'Abeille Médicale*, Dec. 21, 1885.

THE FERMENT OF SPUTA.—The observations of Filehne, who found in the sputa of pulmonary gangrene a ferment capable of dissolving albumen and elastin, have been extended by ESCHERICH, with the following results:

The glycerine extract of the sputa of pulmonary gangrene dissolved albumen rapidly in alkaline solution, but was inactive in acid media. Serous, muco-serous, and muco-purulent sputa of bronchitic origin, were practically inactive. The sputa of phthisis gave positive results in the fifteen cases in which it was used, though its proteolytic power was somewhat less than that manifested by the sputa of gangrene of the lung. The action of bacteria as a digestive agent was excluded by control experiments.—*Centralb. f. klin. Med.*, Nov. 28, 1885.

NEW ANTISEPTIC DRESSING FOR USE IN THE FIELD.—DESQUIN has recommended a very compact, simple, and cheap antiseptic dressing for use in the battlefield. It consists of filter-paper, sterilized by a prolonged heat of 248° F., which is then immersed in any desired antiseptic solution, and slowly dried. Seven or eight layers are applied to the wound, covered with gutta-percha, and held in place by a few turns of roller-bandage.—*Revue de Thérapeutique*, December 15, 1885.

PASSAGE OF PATHOGENIC MICROBES FROM MOTHER TO FÆTUS, AND IN THE MILK.—KUBASSOW (*Wratch*, 1885, Nos. 31, 32, and 36), after passing in review the observations of Chamberlain, who proved the passage of microbes from mother to fœtus in chicken cholera, publishes an important original investigation from the laboratory of Pasteur.

He has shown that in pigs, malignant œdema rouget (a disease of swine), and tuberculosis, the microbes concerned pass to the fœtus, a transit which he ascribes to direct communication between the vessels of the fœtal and maternal placenta (?). In the so-called Siberian pest, rouget, and tuberculosis, the bacilli pass to the milk, where they are to be found up to the death of the animal or the cessation of the secretion. In the absence of any wound, especially of the alimentary tract, the sucklings are apparently uninfected by such milk, even up to the death of the mother. Sows affected with tuberculosis or rouget did not become pregnant.—*Centralb. f. Gynäkologie*, Dec. 5, 1885.

COCAINE IN THE TREATMENT OF DISEASES OF THE NOSE, LARYNX, AND PHARYNX.—SCHNITZLER records one hundred cases in which he has employed cocaine in the treatment of diseases of the upper air-passages. He regards its use as satisfactory in operations upon the tonsils, also in hyperæsthesia of the pharynx, but as not especially advantageous in acute pharyngitis. While praising the application of the drug in operations upon the larynx, he regards its use as superfluous in laryngoscopic and rhinoscopic examinations. In irritative cough, in acute and chronic laryngeal catarrh, and in laryngeal tuberculosis, the symptoms were favorably affected by the treatment in question.

He regards the presence of glycerine as advantageous, and recommends the following formula as adapted for general use:

Cocaine muriate	2.5 parts.
Glycerine	20 "
Water	80 "

When a long-continued anæsthetic effect is desired, the following formula is recommended:

Cocaine muriate	2.5 parts.
Morphia	2 "
Glycerine,	
Water,	of each 50 "

For insufflation:

Cocaine muriate	2.5 parts.
Lead acetate	20 "
White sugar	80 "

Or:

Cocaine muriate	2.5 parts.
Bismuth subnitrate,	
White sugar	of each 50 "

For nasal injections and for inhalations a solution of cocaine of the strength of one part in five hundred is employed.—*Centralblatt f. Chirurgie*, Dec. 19, 1885.

THE RESPECTIVE TOXICITY OF THE ORGANIC AND SALINE CONSTITUENTS OF THE URINE.—After passing in review the observations of Felz and Ritter, who regarded the symptoms of experimentally induced uræmia as due to the inorganic urinary constituents, especially the salts of potash, and also those of Bouchard, who

affirmed the toxicity of the organic elements, LÉPINE and AUBERT record the results of their experiments in this regard.

In each of their experiments two dogs of the same race and of equal weight were used. Into the femoral vein of one of them was injected a given quantity of normal urine, while into the same vein of the other dog there was injected a watery extract of the ash of the same urine, diluted to its previous volume. The results showed that for each kilogramme of the dog's weight 60 c.cm. of normal urine were required to induce death, while 65 c.cm. of the aqueous extract of the urinary ash per kilogramme of body-weight were needed to produce death. The toxicity of the normal urine, therefore, exceeds but slightly that of its inorganic constituents. The case was different when the urine of fever patients was used. Here 25 c.cm. per kilogramme were sufficient to cause death, while of the solution of its inorganic constituents, prepared as before, 40 c.cm. were found to be the minimum lethal dose. It is evident, therefore, that the urine of fever possesses nearly twice the toxicity accounted for by its inorganic constituents. The symptoms in the two groups of cases also were different, for while the urine of fever caused clonic convulsions, the normal urine always produced death by heart failure.—*Centralbl. f. klin. Med.*, December 19, 1885.

MITRAL STENOSIS AND LEAD POISONING.—The influence of saturnine intoxication on the various tissues of the body is a subject that merits even further attention than it has yet received. Neurologists are acquainted with a variety of nervous diseases clearly the outcome of lead poisoning; and Dr. Gowers has, we believe, asserted that no symptom of nervous disease may not be due to lead. Vascular lesions have long been known to be caused by the prolonged action of this metal; and now M. Duroziez suggests that a limited lesion of the heart—mitral stenosis—may in a certain number of cases be due to the same far-reaching cause. The suggestion arises from his having observed several cases of mitral obstruction in house-painters, compositors, and certain polishers.—*Lancet*, January 2, 1886.

THE ACID REACTION OF GONORRHOÆAL PUS.—MARTINEAU maintains that the pus of gonorrhœa always presents an acid reaction, and that this characteristic affords a valuable diagnostic sign. Thus, while the local secretions in simple vaginitis and vulvitis are alkaline, these diseases, when of gonorrhœal origin, present an acid secretion. The same condition obtains in urethritis in the male, and also in the relatively very rare condition of gonorrhœal metritis, which, according to Martineau, may be diagnosed by the introduction of litmus paper into the uterine cavity.—*Centralbl. f. Gynecologie*, December 19, 1885.

LACERATION OF THE OS AND CERVIX UTERI, AND THE OPERATION OF TRACHELORRHAPHY.—DR. GRAILY HEWITT, in a clinical lecture which is published in the *British Medical Journal* for Jan. 2, 1886, summarizes his views as to the indications for the performance of trachelorrhaphy as follows:

The operation is indicated by the presence of a chronic extensive eversion of the cervical lining, by the presence of considerable hypertrophy of the os, the result of laceration, and the more so if hypertrophy and

eversion be conjoined; by the presence of chronic severe local pain, evidently traceable to the irritation of a raw surface less extensive in amount, or traceable to cicatricial hardening at the bottom of the fissure; by the association of marked laceration with a troublesome displacement of the body of the uterus; by the presence of repeated miscarriages in a chronic case; by the presence of a severe recent laceration, even in cases where no severe symptoms have had time to develop themselves, with the view of preventing (1) cellulitis; (2) the occurrence of cancer; (3) the supervention of symptoms generally; lastly, by the presence of general severe prostration, inability for locomotion, etc., obviously traceable to laceration.

The operation itself is not, in most cases, a difficult one, but, in some cases, it is so. In assisting to hold the cervix down, he has found the large tenaculum hooked forceps, depicted in the last edition of his work on *Diseases of Women*, made by Mayer and Meltzer, of very great utility. Sometimes the nodular hypertrophy renders coaptation of the edges, after paring them, not easy, owing to one side of the rent being very short, the other very long. Another difficulty is, in some cases, the excessive hardness of the tissues to be perforated by the needle, which is sometimes so great that much force is required to penetrate the tissues. The needles need to be very strong for such cases. He has found No. 6 silver wire most suitable for sutures, and has generally removed them in not less than ten days. Probably it would be better to leave them a week or two longer, in cases where the patient is very weak and nutritive action feeble. The importance of a preparatory treatment before proceeding to the operation is emphasized.

TWO CASES OF SEVERE ANEMIA CURED BY SUBCUTANEOUS INJECTIONS OF BLOOD.—Two severe cases of anæmia have been treated by SILBERMANN by v. Ziemssen's method. One case was that of a very anæmic boy eight years of age, who suffered with somnolency and frequent fainting. With great caution twenty c.cm. of defibrinated blood were injected under the skin of each thigh, which procedure was repeated nine days thereafter. Improvement dated from the first injection, and was constant for ten weeks, when patient was discharged cured. In the second case a girl of eleven years, who had presented symptoms of the most intense anæmia, resulting from intestinal hemorrhage, received twenty-five c.cm. of blood in the subcutaneous connective tissue of each thigh. Her gain in weight was steady from this time and amounted to nearly eight pounds in six weeks.—*Centralbl. f. klin. med.*, Dec. 5, 1885.

LEFT VENTRICLE PERFORATED BY A GASTRIC ULCER.—At a recent meeting of the Academy of Medicine in Ireland, a very remarkable specimen was exhibited by DR. J. MAGEE FINNY. It was an example of an ulcer of the stomach, which perforated the left ventricle of the heart and caused death by hemorrhage. The subject of this interesting example was a lad aged seventeen, of a somewhat strumous constitution, who was admitted into hospital under Dr. Finny's care about two months since, and died early in December. During his stay in the hospital, pain was complained of about the cardiac region, and pericarditis was diagnosed, but,

strange to relate, there were no symptoms of any gastric irritation, neither pain nor vomiting. On the day death occurred the patient passed blood by stool, and a post-mortem examination showed that the stomach was entirely filled with blood.—*Lancet*, December 26, 1885.

TREPHINING FOR EPILEPSY.—At a late meeting of the Northumberland and Durham Medical Society, Dr. OLIVER showed a boy who had been trephined in the right parietal region for supposed traumatic epilepsy. The fits had developed after a blow on the head; and although, on admission to the Newcastle-on-Tyne Infirmary, no injury could be detected, it was decided to trephine, as the epileptic phenomena were unilateral. The opening was made an inch above and behind the right ear, and a quantity of effused serum and lymph removed. The wound healed well, but the fits continued, though with less severity and frequency.—*British Medical Journal*, January 2, 1886.

ALOPECIA AREATA AND BACTERIUM DECALVANS.—V. SEHLE has described a micrococcus found in the hair roots in alopecia areata, and has succeeded in obtaining a pure culture of the organism and also in producing the characteristic local baldness in certain animals by its inoculation. It is probable that the micrococcus of v. Sehle is identical with the organism described by George Thinn in 1881.—*Centralb. f. klin. Med.*, December 5, 1885.

BROWN-SÉQUARD'S MIXTURE FOR EPILEPSY.—

Iodide of potassium	8 parts.
Bromide of potassium	8 "
Bromide of ammonium	4 "
Bicarbonate of potassium	5 "
Infusion of calumba	360 "

Dissolve. A teaspoonful before each of the three principal meals, and three dessertspoonfuls on going to bed. The solution should be given diluted in cases of idiopathic epilepsy.

If the pulse of the patient be feeble, the potassium bicarbonate is replaced by ammonium carbonate, while for the 360 parts of infusion of calumba there are substituted 90 parts tincture of calumba and 270 parts of distilled water.—*L'Union Médicale*, December 31, 1885.

MUSCLE TONUS.—MOMMSEN has repeated, with certain modifications, the experiments of Brondgeest, which showed that in a suspended decapitated frog, the leg in which the sciatic nerve was cut, hung lower than did the other leg—in other words, possessed less tone. MommSEN concludes that muscle tonus is a muscle reflex in the broadest sense of the term, and that its stimulus is a mechanical one, namely, the constant stretching of the muscle and its adnexa, as conditioned by its anatomical attachments. The reflex is not exclusively dependent upon the stimulation of cutaneous sensory nerves, for flaying, section of the posterior spinal roots, and anæsthesia of the skin (by carbolic acid) do not destroy the tonus.—*Centralb. f. klin. Med.*, December 5, 1885.

EMULSIFYING POWER OF HUMAN PANCREATIC JUICE.—CH. ROBIN obtained from each of two executed criminals, at respectively 8 and 12 hours after death, a pancreatic extract of marked emulsifying power. Emulsions made with these extracts remained during one

month entirely without change and without the appearance of decomposition. The emulsion produced by the bile in these cases was not permanent.—*Centralb. f. d. med. Wissenschaft*, December 26, 1885.

TREPHINING FOR TRAUMATIC EPILEPSY.—MR. WHITEHEAD presented at a recent meeting of the Manchester Medical Society a man, aged twenty-eight, whom he had successfully trephined for traumatic epilepsy. The patient fell down a quarry, a distance of thirty feet, in May, 1884, and received a compound fracture of the skull, for which he was treated for seven weeks in the Bradford Infirmary. Since his discharge, he had suffered from constant headache, and for seven weeks preceeding his admission into the Manchester Infirmary on September 29, 1885, he suffered from epileptic fits, sometimes amounting to six during twenty-four hours, and never free from headache and depression during the intervals. On October 2d, he was trephined immediately outside the area of the fracture. Nothing abnormal was observed through the aperture; nevertheless, the man had ever since, with the exception of one attack, been free from fits, and his headache and depression had disappeared. Mr. Whitehead attributed the improvement rather to reflex influences than to any direct result of the operation. He promised to report the further progress of the case.—*British Med. Journal*, January 2, 1886.

FURTHER RESEARCHES ON MALARIA.—In the current number of the *Fortschritte der Medicin* there appears a translation from the Italian of some further researches on malaria by PROF. MARCHIAFAVA and DR. CELLI. The chief results so far obtained are thus summed up: 1. In the blood of individuals suffering from malaria there may be found in the interior of the red blood-disks minute organisms composed of homogeneous protoplasmic particles which are endowed with lively amœboid movements, and can be distinctly stained. These organisms are only found in the blood in cases of malaria, and are termed plasmodies or hæmoplasmodies of malaria. 2. In the interior of these units reddish or black pigment may be detected, but it is not an essential constituent, being merely derived from the hæmoglobin of the red disk. According as this pigmentation does or does not take place, we have or have not melanæmia. 3. The hæmoplasmodies may be transformed by a process of fission into a group of granules which do not possess amœboid movements. This fission may occur in the pigmented as well as in the non-pigmented plasmodies, and it is most probable that this is the ordinary mode of multiplication within the human organism. Infection may occur as the result of the intravenous injection of malarial blood, as is shown not only by clinical experience, but also by the fact that in the blood of the receiver the hæmoplasmodies may be discovered. The units further increase as infection progresses, and diminish, until they disappear, as infection ceases, whether naturally or under specific treatment. The authors, in determining some of the latter points, made experiments on a man aged forty-three, who was suffering from paralytic agitations, but who had never had any malarial fever. The blood was taken from a malarial subject during his apyrexial period, and the febrile movement commenced in the receiver the same evening.—*Lancet*, January 2, 1886.

THE MEDICAL NEWS.

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SATURDAY, JANUARY 16, 1886.

INFANTILE PARALYSIS OF CEREBRAL ORIGIN.

PARALYSIS in children, even when unilateral, is usually regarded as a spinal affection, but there are, apparently, certain cases of cerebral origin in which the motor area of the gray cortex is involved, resulting in the production of paralysis, more or less complete, on the opposite side of the body. STRÜMPPELL describes this form under the term *polioencephalitis acuta*, and from his account in the *Deutsche medizinische Wochenschrift*, x. 44, and from the more recent paper of RANKE, in the *Jahrbuch für Kinderheilkunde*, xxiv. 1 and 2, we can gather a tolerably accurate picture of the disease.

Strümpell has had twenty-four cases, the youngest in an infant of six weeks, the oldest in a child of six years. In a majority of the cases no special cause was apparent, but one followed measles, and another scarlet fever. As in poliomyelitis, healthy children seem most frequently attacked. There is usually an initial stage of fever, with vomiting, convulsions, and sometimes loss of consciousness. Occasionally the attack comes on suddenly without any premonitory symptoms. After two or three days the parents notice that the child has lost the power of the muscles on one side of the body. There is more often total paralysis of the arm than of the leg; and the facial paralysis is seldom extensive, but is confined to the lower region, and is of slight duration. There may be monoplegia, either brachio-facial or crural. In some cases there is no definite paralysis, but rather an ataxia, with great clumsiness in using the affected members. The muscles do not undergo a degenerative atrophy, nor do they present the reaction of degeneration. The normal tension may be maintained,

and the flaccid condition of poliomyelitis is not observed. The reflexes are usually increased. Sensation on the affected side may be reduced, but it is more commonly normal. Ultimately, as a result of the cerebral irritation, there may be epileptic attacks, hemichorea, athetosis, contractures, and, if the affection is in the left hemisphere, disturbances of speech.

Strümpell draws a parallel between the cerebral and the spinal affection. In both, healthy children are attacked after an initial period of fever, and in both the gray matter is the seat of the disease, the anterior horns of the cord being affected in poliomyelitis, and the motor area of the cerebral cortex in polioencephalitis.

In the later stages of the disease there is atrophy of the affected convolutions, and the shrinkage may be so great as to induce the porencephalous condition described by Kundrat. The precise nature of the changes in the early stage has not yet been determined.

Ranke records nine cases which correspond, more or less closely, with Strümpell's description; six became hemiplegic, and three monoplegic. In the former there were irregular choreic movements in the affected limbs. Unlike the condition in poliomyelitis, the tendon reflexes were retained. The electrical conditions of nerve and muscles were not diminished, and there was no reaction of degeneration.

This condition of polioencephalitis acuta described by Strümpell would seem, in the majority of instances, at least, to be simply the early stage of the affection known as spastic hemiplegia of infants, so well observed by James Ross, Charcot, and others. In these cases the onset of the disease is in early life, from the age of two months to four or five years. As described by Ross in *Brain*, vol. v., the attacks come on with convulsions and unconsciousness, often preceded by a brief initial illness, and when the child recovers consciousness, the hemiplegia is noticed. Subsequently contractures become established in the affected limbs, which are often the seat of athetosis and choreic movements. Later on, at the tenth or twelfth year, epileptic attacks supervene, and there is failure of the intellectual faculties. The lesion is essentially a diffuse sclerosis, with retraction in the motor area of one cortex, and this is sometimes so marked that the cases have been described as unilateral atrophy of the brain. Among possible causes of the primary lesion, Ross suggested a local encephalitis.

The subject of spastic hemiplegia is exhaustively considered in a recent number of Virchow's *Archiv*, Bd. cii., by BERNHARDT, who records eighteen cases, occurring in early childhood. Healthy children were usually attacked, but in three or four instances the disease came on during convalescence from in-

fectious diseases. As in Strümpell's cases, convulsions and loss of consciousness were the early symptoms, and then hemiplegia, more or less complete, followed, in time, by a spastic condition, choreiform movements, and epileptic attacks.

Bernhardt doubts whether the initial lesion in all instances is the same; but, however that may be, he holds that we can recognize an important clinical group of cases, the primary symptoms of which are characterized by convulsions, loss of consciousness, and hemiplegia, and the secondary by contractures, hemichorea, athetosis, psychical anomalies, and epileptic seizures. The anatomical condition is an atrophic sclerosis, more or less extensive, of the motor region of one hemisphere, and it is very probable that a considerable proportion of these cases have their origin in the polioencephalitis acuta, so well described by Strümpell.

The post-mortem appearances of the acute stage, which are needed to complete the evidence, will doubtless soon be forthcoming.

STRAW IN STREET CARS.

EVERY winter the complaint is renewed against the use of straw or hay upon the floors of the street passenger railway cars. Observation and experience have shown the practice to be uncleanly and injurious to health. It would seem that clean, fresh straw or hay, frequently renewed each day, with a sweeping of the floor before such renewal, would conduce to the comfort of the travelling public during the winter season: but such careful regulation is the rare exception, not the rule. A mass of straw is made to do service for the entire day, or still longer, its continued use permitting of its defilement by the tracking of dirt from the streets, by the expectorations from the lungs, by saliva often stained with tobacco, and by the absorption of exhalations from the body and lungs, especially if the straw be damp. A portion of the straw is pulverized under the feet of hundreds of passengers, and gives rise to a fine dust of a heterogeneous composition, which is not only an irritant to the air-passages, but may also be injurious according to the nature of the impurities which it contains. In brief, the straw becomes the receptacle for all kinds of impurities which are imparted to the confined atmosphere of the cars, rendering its condition noxious. The custom is a pernicious one, and should be interdicted.

The Board of Health of Philadelphia has condemned the practice as contravening the laws of health, and, in the absence of specific law on the subject, has requested its discontinuance. But as the street railway corporations are a law unto themselves, the request has been ignored. A movement is now on foot in City Councils to compel, by ordinance, the abandonment of the practice, and this

movement is endorsed by the health board. Such an ordinance should receive the hearty support of the representatives of the people.

It is obligatory upon the street passenger railway companies to keep their cars always in the cleanest possible condition; and this requirement is especially important in the winter season, when free ventilation is cut off. Cocoa mats upon the car floors, changed frequently during the day, will answer the purposes of comfort and cleanliness. Their cleansing by scrubbing under a stream of water, and drying in a hot-air chamber, would be a matter of expenditure of trifling consideration compared with the advantages which would inure to the patrons of the companies from a condition of cleanliness constantly maintained. A word to the wise is sufficient.

HÆMOGLOBINURIA.

EVIDENCE is accumulating in favor of the view that hæmoglobinuria is a blood disease, and not primarily an affection of the kidneys. Certain toxic agents, of which malarial poison is the most clearly recognized, act upon the blood in such a way as to cause a separation of the hæmoglobin, which is then excreted, as a foreign body, with the urine, either alone or with the remnants of the disintegrated corpuscles. Many of the cases of the so-called paroxysmal hæmaturia are of this nature.

Experimental researches, particularly those of Afanassiew, in Cohnheim's laboratory, have clearly shown that various substances, such as glycerine, pyrogallol acid, and foreign blood, introduced into the circulation will cause destruction of the corpuscles. The dissolved hæmoglobin is excreted by the kidneys, and, if the dose of the poison is large, and the destruction of the corpuscles very great, jaundice may be produced as well as the hæmaturia. Nephritis of an intense character is an almost invariable consequence.

In cases occurring spontaneously in man and animals, evidence of blood destruction is, of course, afforded by the presence of the coloring matter in the urine, but there are surprisingly few observations upon the state of the blood itself during the attack. Some writers, indeed, speak of a granular debris in the plasma and a distorted state of the corpuscles, but we know of no observation similar to the one recorded by HEINEMANN, of Vera Cruz, in the current number of Virchow's *Archiv*, cii. 3; The case was one of hæmaturia in intermittent fever, occurring in a lad, aged fifteen, who when first seen had had quotidian ague for three days. Ever since a previous attack, three months before, the urine had been dark in color. During a paroxysm, while the temperature was 40.5° C., blood was drawn with a cupping glass and carefully examined. The red corpuscles had uniformly lost their coloring matter, which was in

solution in the plasma, so that the cells were represented by pale, colorless disks floating in a tinged medium. Scarcely a normal corpuscle could be found. After two days, the condition had so far improved that the corpuscles again presented a normal appearance.

Dr. Heinemann writes like a careful, well-trained physician, and the editorial supervision of the *Archiv für Pathologische Anatomie* is notoriously stringent, otherwise we should be inclined to doubt the accuracy of an observation which necessitates the conclusion that the oxidizing processes of the body may be carried on by hæmoglobin in a state of solution in the blood plasma. And further, as we cannot suppose that corpuscles which have once lost their coloring matter can ever be restored to the normal state, we must infer, in this case, a complete restitution of the cells within forty-eight hours, which seems scarcely credible. The observation, however, is of interest, and may serve to stimulate others who have cases of this kind to make a careful examination of the blood with a view of determining whether a solution of the coloring matter in the plasma, hæmoglobinæmia, always precedes the hæmoglobinuria.

There is a common affection of the horse, variously known as azoturia and acute nephritis, but which is probably, as Bollinger suggested, a toxic hæmoglobinuria, a careful study of which will, we feel sure, throw light upon the pathology of the subject in question. An animal, after standing for a day or two in the stable, is taken out for work or exercise, and within a short time is seized with weakness, particularly of the hind legs, breaks into a profuse sweat, and passes bloody urine. Death may take place within an hour, but, more commonly, the attack is prolonged for several days and recovery frequently occurs. The post-mortem appearances are largely those of acute nephritis and have been carefully described by A. W. Clement in the *Journal of Comparative Medicine*, October, 1885. There are also parenchymatous changes in the liver and in the muscles, particularly those of the lumbar region. The sudden onset, in apparently healthy animals, the rapidity with which the fatal termination may occur, the constant presence of hæmoglobin, with or without corpuscles, in the urine, together with the renal and other changes, make up a remarkable group and point to some quickly acting toxic agent as the cause of the disease. In certain anatomical features it presents a striking resemblance to many of the experimental cases described by Afanassiew, and a fuller knowledge of its pathology may lead to a better understanding of some of the examples of næmoglobinuria in man which are at present so puzzling.

ANOTHER EXPRESSION OF PROFESSIONAL SENTIMENT.

THE profession of Philadelphia, in the course of their loyal duty to the American Medical Association, have formally and most emphatically placed the seal of condemnation upon the men who have been giving support to the dissensions which were aroused at New Orleans, and which are tending to the destruction of the Association.

At the annual meeting of the Philadelphia County Medical Society, held last week, unusual interest centred around the election of delegates to the Association, and two tickets were placed in the field. One was framed in the interests of the supporters of the action of the Association at New Orleans in reference to the organization of the International Medical Congress, and included the names of all the men in Philadelphia who are prominently identified with this movement. The other was made up of nominees who are opposed to this action and the dissensions it has engendered in the profession. Both tickets were duly mailed in advance of the meeting to every member of the Society, so as to secure an absolutely free and fair, as well as full expression of opinion by the profession of Philadelphia. The latter ticket was elected by the overwhelming majority of more than four-fifths (169 to 36), at the largest meeting of the Society ever held.

It is the solemn duty of the New Committee of the Association charged with the arrangements for the meeting of the International Medical Congress at Washington, to ponder well, before it is too late, the meaning of this, and of the numerous other expressions of dissent which have reached them from all sides. They must know that the profession of Philadelphia, New York, Boston, Baltimore, Washington, and Cincinnati are practically united in disapproval of the action which brought the New Committee into existence, that serious differences of opinion, to say the least, exist in all the other principal cities of the United States, and that the sympathies of the profession of Canada and of Europe are not with them. They must recognize that to persist in their present course is to impair the good name of the American medical profession, and to imperil the vital interests of the American Medical Association.

One month ago THE MEDICAL NEWS, in an earnest plea for the restoration of harmony in the profession, expressed the hope that the Committee of the Association would use their influence to this end, and by their action show that in view of the present strained relations—which, if maintained, mean failure to the Congress and disaster to the Association—they were ready to sink personal considerations for the general good. We renew this plea to-day in the name of the large mass of the profession of the United States, who earnestly demand the restoration of harmony

and the preservation of the integrity of the American Medical Association. A crushing responsibility will rest upon the Committee if they fail to meet this demand.

REVIEWS.

A COMPLETE PRONOUNCING MEDICAL DICTIONARY.

By JOSEPH THOMAS, M.D., LL.D. 8vo. pp. 844. Philadelphia: The J. B. Lippincott Company.

A REMARKABLY handsome book, with good paper, large type, and not unwieldy bulk. The system of pronunciation is that which characterizes other works by the same author, well and elaborately explained in the preface. Dr. Thomas also explains that he has thought it well to include many botanical terms on account of the close alliance existing between medicine and botany; but we were not prepared for the immense number of such terms with which each page bristles. Of course, where so much attention is devoted to the language of a collateral science, there is a lack of space for distinctively medical terms, always numerous and ever-growing, and the absence of very many of which terms detracts most seriously from the value of the book as a medical dictionary.

We will try to make clear our meaning by facts culled from a single page. We looked for pelyometer, an old term for pelvimeter, but Dr. Thomas has either not heard of it or thinks it unworthy of mention. The same thing is true of the synonymous word pelycometer. We look further, but alas! in vain, for that choice term pelycochirometresis. Now, it may be said, such terms are obsolete, and are barbarous; but, if the student of medicine comes across one of them, he will very naturally and properly look for an explanation of them in the pages of a medical dictionary. We take it that one of the important functions of a dictionary is to give information concerning words but rarely used, and we are most decidedly of the opinion that the medical student is more likely to require information about such old polysyllables than he is to be told all about the familiar family of plants known as Pelargoniums. The latter may supply his bouquets during his medical juvenescence, and may help to adorn him at his graduation; but, after that, if he practises obstetrics, he will find pelycochirometresis of far more importance to him than the whole family of Geraniums, even if one of these has been experimented with in medicine.

How complete the work is as a botanical dictionary we know not, that is beyond our province; but, should it possess the same defects in that direction as we have referred to from a medical standpoint, it will not be highly valued by students of botany. But it makes no pretensions in that direction, and any criticism at the hands of botanists would, therefore, be out of place.

A very noticeable article, and one which it would be unpardonable to pass by, is from the pen of Dr. Morris Longstreth, on Pathogenesis. It is thoroughly and admirably done, representing very fully the present state of our knowledge upon this important topic. We deem it as particularly incumbent upon us to mention this exhaustive paper, that we may help to disinter it from its surroundings, it being of a scope and character alto-

gether unusual for any dictionary article, and different from anything we have noticed in its environment.

We have, perhaps, now said sufficient to give our readers an idea of the character of this *complete dictionary*. If there is anything we dislike, it is the utterance of harsh criticisms. If there is anything we like, it is to say smooth and pleasant things. We shall, therefore, withhold our hand, and content ourselves by remarking that we should have had even less to say had it not been for the extraordinary statement of the title-page, that the book is a *complete dictionary*. A dictionary it may be—indeed, we cannot deny that a dictionary it is; but, to term it a complete one, is to put black for white, and to speak of that which is not, as though it were.

PHYSICIANS' VISITING LIST FOR 1886. Lindsay & Blakiston, 1886.

THIS standard physician's note-book, now in the thirty-fifth year of its publication, is admirable both in its practical arrangement and mechanical finish. It is too well and favorably known to require description or praise.

PLUMBING PROBLEMS; OR, QUESTIONS, ANSWERS, AND DESCRIPTIONS RELATING TO HOUSE DRAINAGE AND PLUMBING, from the *Sanitary Engineer*. With one hundred and forty-six illustrations. 8vo. pp. xiv. 244. New York: *The Sanitary Engineer*, 1885.

It has been a prominent feature of *The Sanitary Engineer*, a paper published weekly, and devoted to engineering, architecture, construction, and sanitation, to solicit queries on topics connected with the sanitary arrangements of dwellings and buildings generally, which are printed in its pages, with appropriate comments by persons specially fitted to discuss the various problems involved. The present volume is a selection from its pages of questions and comments illustrative of the common defects in house-drainage, plumbing, etc., as well as of the methods of their correction.

The illustrative cases relate to a great variety of subjects, and are included under the general topics of water supply, sewerage, sewage disposal, ventilation, heating, lighting, house-drainage, and plumbing. Appended to the book is a form of plumbing specification for an isolated country-house, and also the text of the plumbing laws and regulations in force in New York, Brooklyn, and Boston, in May, 1885, which will be most serviceable, as models, to those cities and towns which are contemplating the introduction of such regulations.

The book reminds one of Mr. Pridgin Teale's *Dangers to Health, or Pictorial Guide to Sanitary Defects*; but it is very much more comprehensive. Illustrations are freely used, but they are not the exclusive, though a very prominent, feature of the book. The drawings in many cases so plainly indicate at a glance the idea intended to be conveyed, that comment is unnecessary.

Most of the inquiries contained in the book have been suggested by actual experience, and have a bearing on practical questions of frequent recurrence. The answers and comments furnish a fund of information, pointedly detailed and intensely practical. As this matter is scattered through the pages of the different volumes of *The Sanitary Engineer*, it is available only to the few, and then only after diligent search. The selection of the

best material and its compilation in the present volume, is a thoughtful and most useful enterprise, which ought to be appreciated by the householder as well as by the artisan and professional sanitary engineer.

The book is well printed on good paper, is profusely illustrated, and as it is supplied with a good index and a full table of contents, it will be exceedingly useful as a work of reference, and will aid in solving many a troublesome problem.

SOCIETY PROCEEDINGS.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, December 22, 1885.

THE PRESIDENT, CHARLES MCBURNEY, M.D.,
IN THE CHAIR.

DR. C. K. BRIDDON presented a patient with the following history of

PENETRATING WOUND OF RECTUM AND BLADDER; RECTO-VESICAL FISTULA, COMPLICATED WITH STONE; OPERATION; CURE.

J. Van Tassel, aged twenty-two years, native of United States, single, laborer. Entered Presbyterian Hospital in the city of New York, service of Dr. Briddon, Nov. 4, 1885.

Two years before admission, while driving, he fell on one of the "stakes" of a "bark rigging." The stake was blunt, about one inch in diameter, and six inches in length. It entered just behind the anus, penetrating nearly its whole length. When he raised himself from the stake there was a gush of urine, but very little blood. He did not suffer much pain, and went on with his team until exhausted, when he was taken home in a sleigh. During the following night, gas and feces were passed by the urethra. The external wound healed in four or five weeks, but the other symptoms continued. At times he would pass all his urine through the natural outlet, but nearly always the larger portion of it came by the rectum. Seven months before admission he began to suffer more pain in the perineum. Occasionally the stream would suddenly cease, and the suffering was aggravated by locomotion. On admission the patient's general condition was fair; he complained mainly of difficulty in urination; he had evening exacerbations of temperature, that were not influenced by quinine. A No. 27 French sound introduced into the bladder, came in contact with a stone of considerable size. Examination by the rectum found a fistulous communication with the bladder, situate a little to the left of the median line, and two inches and a half above the verge of the anus. He passed about sixty ounces of urine daily, the largest amount passed by the urethra in twenty-four hours being four ounces.

Operation Nov. 14, 1885, 3 P.M. Patient etherized and on his back. A catheter communicating with an irrigator was introduced into the bladder, and the cavity was thoroughly washed out with a warm solution of boracic acid. Its exit from the rectum was facilitated by the introduction of an anal speculum. The catheter was then withdrawn, and a staff was introduced and placed in contact with the stone. The patient was then placed in the knee-elbow position, with the pelvis a

little higher than the shoulders, and the thighs secured in a position of abduction by an interferemoral crutch; the posterior wall of the anal aperture was transfixed by stout silk loops; and, whilst the parts were made tense by these, the posterior wall of the rectum was split in the median line as high as the point of the coccyx, aided by the introduction of a large Sims speculum and lateral retractors. It was possible to make a satisfactory digital and ocular exploration of the fistulous communication between the bladder and the rectum. It was distant two and a half inches from the anus. It admitted the introduction of the index finger, which could easily estimate the relations of the parts. The finger appeared first to pass through a circular aperture in the resisting wall of the rectum, then into a short oblique canal of less resistance, and probably not half an inch in length, and then through a second circular constriction which was apparently situate in the bladder wall, and then it came in contact with the stone. It had been determined to secure efficient drainage from the bladder by removing the stone through a median perineal opening, which was easily accomplished, removing an oval calculus weighing nine drachms. The fistulous opening was now once more thoroughly exposed; its margins were denuded of mucous membrane; and its sides were approximated by the introduction of ten catgut sutures; the incision made in the posterior wall of the gut was closed by a line of suture through the lining membrane, a line of buried, and a continuous suture through the skin; large drainage tubes were introduced into the bladder and rectum, and securely fixed in position. In the after-treatment milk was excluded, and he was restricted to the use of Leube's beef solution.

Nov. 24. The tube was removed from the rectum, the wound in the posterior wall of which was not entirely healed.

27th. Tube was removed from perineal incision. There was no escape of urine from the rectum after the operation, and examinations made November 25, and Dec. 3 and 11, found the fistulous communication completely closed, and the patient was dismissed cured.

DR. ALFRED C. POST referred to a case, occurring a number of years ago, in which the patient attempted to jump over a broomstick, and the end of the stick penetrating the rectum and passed through into the bladder; he had symptoms of peritonitis, it was said, at the time of the accident. In the following year, when the patient was brought to him, he was suffering from difficulty and pain in passing his urine. On sounding him Dr. Post found a vesical calculus. When the injury was received a circular piece of the seat of the pantaloons was found to be absent. Having ascertained the existence of the calculus, he treated the case by lithotripsy, and on three or four occasions the stone was crushed and fragments passed; it was before the time of Bigelow's apparatus; and at the last crushing, while attempting to withdraw the instrument, he found that an object of considerable size was held in the grasp of the lithotrite, and was removed with some difficulty. On examination, it was found to be the piece of pantaloons which was carried into the bladder at the time of the accident, where it had become the nucleus of the calculus; there was no fistulous opening. The patient recovered perfectly.

DR. GEORGE A. PETERS said that some years ago Dr. Weir had a case somewhat similar to that mentioned by Dr. Post. It was one in which the bladder had been penetrated by a bullet. Dr. Weir crushed the stone, and had the same experience while crushing. He withdrew the body with the lithotrite, and it proved to be a piece of the soldier's pantaloons, which had become the nucleus of the stone.

DR. L. A. STIMSON said that in Dr. Briddon's case the exposure of the fistula through the divided anus was extremely satisfactory; it was almost outside of the body, and its surfaces could be very accurately freshened and approximated.

DR. T. M. MARKOE, speaking of cases in which nuclei of calculi had been forced into the bladder, mentioned a case which he saw in consultation with Dr. Livingston, whom he assisted in the median operation of lithotomy. The history was that at the battle of the Wilderness the patient received a gunshot wound in the right groin involving the bladder, from which he had recovered with a urinary fistula. The fistula gave him comparatively little trouble; but symptoms of stone in the bladder gradually supervened, and several years afterward Dr. Livingston performed the operation mentioned. On removing the calculus and dividing it, the nucleus was found to be a piece of the pubic bone which had been driven into the bladder. Another little piece of bone lying by the side of the large calculus was partially encrusted, but had not formed a stone. They then examined the line of the pubis, and found the depression made by the passage of the ball.

There is another case on record in *The Medical and Surgical History of the War*, that of a patient who was shot through the bladder; symptoms of stone developed, calculus formed, and the nucleus of the calculus was found to consist of a tuft of curled hair, which had been carried in from the pubis.

DR. GEORGE A. PETERS referred to a case in which a hairpin was the nucleus of the calculus, and Dr. Briddon had seen a similar case.

DR. L. A. STIMSON referred to a case in which a piece of the stick used in eating snuff was the nucleus of an oval calculus.

These cases were mentioned to show that the shape of the calculus is not always determined by that of the nucleus.

THE PRESIDENT said the method of exposure of the fistula in Dr. Briddon's case must have been very satisfactory. He imagined that we should see a less number of these cases of urethro-recto-vesical fistulæ now that there are so many calculi crushed. He had met with two cases in which a fistula remained after extracting a large stone. In one case he attempted to drain the bladder over the pubis, after the operation on the fistula, the patient being very young—only four years of age. The drainage went on very well, indeed.

DR. BRIDDON said he had seen two cases of recto-urethral fistula following lithotomy—or, rather, one was ano-urethral, because the opening was close to the verge of the anus. One of them, however, was a real recto-urethral fistula, produced not by the wound, but by the expulsive effort to empty a colon largely distended with casein, the patient having been fed on milk. In the case just reported, Dr. Briddon insisted that the patient should subsist exclusively on Leube's beef solution.

DR. CHARLES MCBURNEY then read a paper entitled

TWO CASES OF OPERATION FOR PYLORIC STENOSIS,

(See page 58.)

DR. BRIDDON remarked that the fact that the secretion of urine was diminished in these cases was interesting. We should naturally suppose that it would be, because the secretion of urine is largely due to absorption from the intestinal walls. In his opinion, the danger would be from septicæmia, because of the inability of the kidneys to secrete urine properly. He thought that the very fact that Dr. McBurney was obliged to use an instrument with which to dilate the stenosed pylorus was evidence that his cases were much further advanced than those reported by Loretta, and of necessity the patients would be in a much worse condition for an operation.

DR. MARKOE said it seemed to him that in estimating the propriety of this operation, one point should be taken into consideration, which had been only slightly touched upon in the paper, namely, that the patient, with proper care, can sometimes be kept alive indefinitely. This certainly is the fact in a number of cases of dilatation of the stomach from stenosis of the pylorus. He has now under his care a gentleman who for fifteen years has used the method of washing out the stomach once or twice a day, and is still in very comfortable health. He has also another patient, who, for about nine years has done the same thing, and has maintained a fair condition of health.

Of course, this method of treatment can be carried out only by systematic attention to the patient, but that it can be done should be taken into consideration in estimating the propriety of this certainly dangerous operation in any given case.

THE PRESIDENT said that Dr. Markoe's remarks concerning supporting the patient were entirely endorsed by his own experience. He had two patients who had adopted the treatment of washing out the stomach, and they did it by means of a flexible tube and a simple funnel. In the case reported he thought that life could have been prolonged for an indefinite length of time, but it was a question of remaining in the hospital forever, or of having something done with a view to radical relief.

DR. MARKOE said that in certain cases he could conceive that the operation was justifiable and might be successful.

DR. F. LANGE presented specimens as follows:

INTESTINAL OBSTRUCTION; ENTEROTOMY; IMPACTED GALLSTONE EXTRACTED; DEATH.

On the 19th of September I saw, in consultation with Dr. Roth, of this city, a Mrs. S., about sixty years of age, who for four days had presented symptoms of intestinal obstruction. Dr. Roth had treated her one year before for protracted abdominal colic, due, as he supposed, to impacted gallstone. From that time on she had often presented dyspeptic symptoms, and an inclination to constipation. Her present trouble had commenced, as I am told, by severe abdominal pain. At first cathartics had been given; on the second day, when vomiting set in, narcotics were administered, and when the appearance of stercoraceous matter in the vomit gave the certainty that a severe obstruction of

the gut must exist, washing the stomach had been resorted to repeatedly, with but transient relief.

When I saw the patient on the evening of the 19th of September, peritonitis already existed. The heart action was commencing to get weak; pulse between 120 and 130; no excessive tympanites, and a moderate ascites could be made out. Though the patient's general condition was not regarded as encouraging for an operation, the latter, as the only imaginable means of saving life, was proposed and consented to. It was done about midnight, from the 19th to 20th of September. The cause of obstruction had to be left in suspense. I was inclined to believe it to be some peritonitic pseudoligament.

The patient, after a hypodermic injection of brandy, was given chloroform, and laparotomy by median incision was performed. A considerable quantity of turbid, flocculent serum escaped, and after the omental covering had been lifted, the small intestine presented itself moderately distended, and matted together by peritonitic adhesions of more recent date. It was only after a few seconds of tracing the most distended part of the gut that I palpated a hard lump within it, beyond which the intestines were entirely collapsed. It was obvious that the obstruction was caused by this foreign body, which, after longitudinal incision, escaped easily. The wound in the gut was closed by a double row of Lembert's sutures, and the abdomen closed as quick as possible. The patient had got over the operation comparatively well, the latter having lasted only about three-quarters of an hour. Very soon, however, her pulse became almost imperceptible, and in spite of active stimulation, she died after a few minutes of unconsciousness, and about eight hours after the operation. No autopsy allowed.

The specimen, which you see here sawn across, and of which some of the brittle peripheral layers have been broken, has in its centre a crystalline, round nucleus of cholesterin, about the size of a small walnut, around which, in concentric layers, there is a brownish crust, varying in thickness from one-fourth to one-half centimetre, so about two and a half to three centimetres is the average diameter of the concretion. As you see, in the attempt of sawing across a good deal of the external shell has been broken off. The latter is apparently due to apposition during the sojourn of the gallstone in the gut.

CORRESPONDENCE.

LOCAL ANÆSTHESIA BY COCAINE.

IN THE MEDICAL NEWS of January 2, 1886, Professor Dujardin-Beaumetz speaks of having done the operation for phimosis under cocaine. October 24, 1885, a patient, aged thirty-two, presented himself at my office with congenital phimosis. I applied ten minims of a four per cent. solution of cocaine by a dropper between the prepuce and glans penis. After five minutes I dilated with an Ellinger dilator to the full extent of the instrument. This was painless, but not satisfactory as to extent of aperture. I accordingly made a free incision, and introduced the necessary number of stitches, my friend Dr. Wm. L. Taylor kindly assisting me. At the expiration of a week, finding the incision somewhat contracted, I

threw into the prepuce about ten minims of a four per cent. solution of cocaine, and completed the operation thoroughly. Both operations were entirely painless, and, although done in the sitting posture, none of the syn-copal symptoms mentioned by Dujardin-Beaumetz, were experienced by the patient.

In neither did I wait longer than five minutes after the application of cocaine before beginning the dilatation or making the incision.

At the present writing, January 4, 1886, the results are satisfactory in every respect.

Yours respectfully,

ANDREW GRAYDON.

1437 N. TWELFTH ST., PHILADELPHIA.

ABSORBENT COTTON AS AN ELECTRODE COVERING.

To the Editor of THE MEDICAL NEWS.

SIR: In an article on "Absorbent Cotton as an Electrode Covering," which appeared in a recent number of THE NEWS, Dr. Massey, in his statement that "The resistance offered by pairs of sponge-covered and cotton-covered electrodes may be readily compared," etc., appears to have confounded *specific* resistance (*i. e.*, resistance of sponge or cotton) with *contact* resistance. The experiments of Edison, Herbert Tomlinson, Barrett, Heaviside, Bidwell, Naccari, Pagliani, and others, have shown that substances do not materially change their *specific* resistance under pressure. Silvanus P. Thompson found in his experiments with coke-carbon, "subjected to pressure varying from less than one dyne per square centimetre up to twenty-three million times that amount, the resistance did not increase by so much as one per cent. of the whole." On the other hand, according to Sir Wm. Thomson, the resistance of *contact* between two pieces of copper (a good conductor) "may be made to vary in a perfectly continuous manner by changes of pressure, from a small fraction of one ohm, up to a resistance of many thousand ohms," and this is practically what Dr. Massey did with his electrodes. It is not clear in his results that the *specific* resistance of sponge when conjoined with the high resistances of the human body, proves it to be a less or more suitable covering for electrodes than chamois skin, patent lint, cotton cloth, etc.

I do not know what battery cell Dr. Massey used, but taking his own figures, and estimating with the aid of the data furnished in the report of the Battery Committee of the Franklin Institute Electrical Exhibition (see *Franklin Institute Journal*, April, 1885), using the Leclanché disque, one of the cells having the lowest internal resistance, 1 ohm, and Fleming's Leclanché portable, having the highest, 13.5 ohms. Under the most favorable circumstances (*i. e.*, cotton, heavily pressed together) the external resistance of the circuit was 375 to 625 ohms. Allowing 100 ohms for the metal circuit, there are left 275 to 525 ohms as the *resistance of the cotton covering*.

Now, Dr. Massey advises "two or three layers,"¹ and confidently asserts "it need not be feared that additional layers will add much to the resistance of the circuit," as the experiments described below show that wet cotton, deprived of its natural oil, is a much better conductor of electricity than wet sponge." As it is apparent

¹ Italics are mine.

that each layer of cotton will add 275 to 525 ohms resistance, according as the battery cell used is of low or high internal resistance, I think there is good reason to question the value of his results.

If uniformity of resistance is aimed at in selecting an electrode covering, it will be found, not in absorbent cotton of *variable* thickness, but in some covering of *uniform* thickness, as cotton-cloth, patent lint, or chamois skin, long since recommended by Erb and De Watteville.

Respectfully,

GRANVILLE FAUGHT.

115 N. FIFTEENTH STREET, PHILA.,
January 6, 1886.

NEWS ITEMS.

NEW YORK.

(From our Special Correspondent.)

THE COUNTY MEDICAL SOCIETY is very much interested in a suit brought against Dr. A. S. M. Purdy, a well-known practitioner, by a patient, who claims that through his action she was removed from her home, shut up in the Smallpox Hospital upon Blackwell's Island, when she did not have that disease, and was discharged by the hospital physician. The facts are, that Dr. Purdy, after calling in counsel, decided the disease to be smallpox. He reported the case, as he was bound, to the Health Department, and one of its inspectors, Dr. C. E. Lockwood, saw the woman and recommended her removal. A verdict for several hundred dollars was obtained by the plaintiff, the judge, in his charge, evidently siding with her, and holding that Dr. Purdy had "set the machinery in motion which led to her removal." No one at all familiar with the law can doubt for a moment that the Health Department is alone responsible, and that Dr. Purdy simply did his duty, and if he had not done as he did would have been subjected to a heavy fine. Several thousand dollars have been contributed for the purpose of appealing the case.

HEALTH OFFICER OF THE PORT.—A lively fight is being made for the position of Health Officer of the Port. Among the names prominently mentioned are those of Austin Flint, Jr., F. R. S. Drake, Hutchinson, and Lewis Foster, the last of whom is regarded as the "dark horse." The present incumbent has a staunch supporter in Senator Platt.

AM ENDE, the Hoboken druggist, has just been acquitted. It will be remembered that through his carelessness morphine was substituted for quinine, and two young women were poisoned. One of them was the fiancée of a young Dr. Lowenthal, who nursed her through her last illness. The claim of temporary insanity was urged by the defendant. However flimsy such a plea may ordinarily be from a medico-legal standpoint, much sympathy is felt for the defendant. It is well known that at the time of the accident he was in a most deplorable state of mind. Many druggists are cognizant of his peculiarities of mind, his forgetfulness and absent mindedness. Am Ende is known as the inventor of absorbent cotton, and has had more to do with the success of antiseptic surgery than any person in the country, except the surgeons themselves.

UNLICENSED PRACTITIONERS.—The pathway of the counsel to the County Medical Society is not one of roses.

He has arrested all manner of irregular practitioners, the last of whom has sued him for false imprisonment. A general crusade against counter prescribing is about to be inaugurated.

THE DEMAND FOR COCAINE has, like that for bromides and chloral, extended to the general public. One druggist sells no less than six ounces each month.

CINCINNATI.

(From our Special Correspondent.)

ST. MARY'S HOSPITAL.—The following nominations, made at a recent meeting of the staff, have been confirmed by the authorities of this institution:

Dr. Adolph Grimm, to fill a vacancy in the medical staff occasioned by the resignation of Dr. Herman Wilfert, whose ill-health has compelled him to seek a more healthful climate.

Dr. E. W. Walker, promoted to the surgical staff.

Dr. James M. French, appointed Pathologist and Microscopist.

Within the last year, Dr. Frederick Kebler was also appointed to the medical staff.

St. Mary's Hospital ranks, in size, as the second in the city, having a capacity of 300 beds. It is under the management of the Sisters of the Poor of St. Francis, and was the first hospital opened in this country by that order. Although open to patients of every nationality and religion, it is patronized chiefly by the German poor.

ACADEMY OF MEDICINE REPORTS.—At a recent meeting of the Academy of Medicine, the custom of certain journals publishing unauthorized and very incorrect reports of the Society was severely criticised, and steps were taken to prevent such occurrences in the future. The accurate reports of THE MEDICAL NEWS, however, received the approval of the Academy.

MONTREAL.

(From our Special Correspondent.)

MORTALITY STATISTICS FOR 1884-85.—The total number of deaths from all causes in 1884 was 4358, in 1885, 7885; increase of deaths in '85 over '84, 3527. This enormous increase is, of course, principally due to the smallpox epidemic which has been raging here for the last six months, but, exclusive of the deaths from smallpox, there was last year an increased death-rate of 363. This increase was due chiefly to an epidemic of measles and diphtheria, which occurred last spring. In 1884 there was not a single death from smallpox, but in 1885, in the city proper, the deaths from this disease reached the large number of 3164. If the deaths from smallpox in the suburbs be added, the total would amount to nearly 4500. The suburbs of Montreal, though continuous with the city, are not within its boundaries, but practically belong to it for statistical purposes: that is, if the statistics are to be worth anything.

Of the 3164 deaths from smallpox occurring in the city proper, 3067 were Roman Catholics and 97 were Protestants. The Protestant population comprises about one-third of the whole, and is well vaccinated; the Roman Catholics, with the exception of the Irish, among whom the mortality has been very small, are nearly all

unvaccinated. Here, then, is another nut for the anti-vaccinationist to crack.

The total number of burials in the Roman Catholic cemetery (which buries people both from the city and surrounding municipalities) last year (1885) was over ten thousand, the year before (1884) only five thousand.

ANTI-VACCINATION SOCIETY.—An anti-vaccination society has lately been established here. The president is a notorious quack doctor, who lives by preying on the fears and credulity of those unfortunate youths who are afflicted with sexual hypochondriasis. He has the distinguished honor of holding a Philadelphia degree, supplied, for a small honorarium, by that king of doctor-makers—Buchanan. The vice-president is Dr. Coderre, and the members consist of all the peculiars and anti's in the neighborhood who are in fear of being fined by the health court.

THE COLLEGE OF PHYSICIANS OF PHILADELPHIA held its annual meeting on January 6th, and elected the following officers and standing committees for the year:

President.—Dr. S. Weir Mitchell.

Vice-President.—Dr. John H. Packard.

Secretary.—Dr. Isaac Norris.

Treasurer.—Dr. Charles Stewart Wurts.

Honorary Librarian.—Dr. James H. Hutchinson.

Recorder.—Dr. J. Ewing Mears.

Censors.—Drs. Lewis Rodman, William Goodell, Alfred Stillé, Samuel Lewis.

Councillors (to serve until January, 1889).—Drs. Richard A. Cleemann, William Thomson.

Committee on Publication.—Drs. James H. Hutchinson, Robert P. Harris, Arthur V. Meigs, J. Ewing Mears.

Committee on Library.—Drs. I. Minis Hays, Samuel W. Gross, Morris Longstreth, George C. Harlan, William Osler.

Committee on Mütter Museum.—Drs. William Hunt, John H. Brinton, Morris Longstreth.

Committee on Hall.—Drs. Horace Y. Evans, Thomas Hewson Bache, J. Ewing Mears, Morris J. Lewis, William Barton Hopkins.

Committee on Lectures.—Drs. Joseph Leidy, William Goodell, William F. Norris, John H. Packard, Samuel W. Gross.

Committee on Directory for Nurses.—Drs. William W. Keen, Wharton Sinkler, James C. Wilson.

THE ANNUAL MEETING OF THE PHILADELPHIA COUNTY MEDICAL SOCIETY was held on Wednesday, January 6, at 4 P. M., the President, R. J. Levis, M.D., in the Chair. Over two hundred members were present, constituting the largest meeting of the Society ever held.

It was moved that the order of the day be suspended, and that, in accordance with the custom of the Society, the polls be opened forthwith and kept open until six o'clock. Numerous technical objections and dilatory motions were interposed, but finally, when a vote was reached, the motion was carried by an overwhelming majority.

Dr. D. Hayes Agnew, in a brief speech, moved that the list of delegates to the American Medical Association and to the Pennsylvania State Medical Society, which he then presented, be substituted for the list presented last October by the Committee on Nominations. Numer-

ous objections and dilatory motions were again interposed; but finally, after considerable delay, the previous question was called and the yeas and nays demanded, Dr. Agnew's motion was passed, and the list of delegates he presented were elected by ballot, receiving 169 votes to 36 for the opposing candidates.

Dr. Agnew then offered the following resolutions, which were adopted with but a single dissenting vote:

Resolved, That at its annual election of delegates to the American Medical Association and to the Medical Society of the State of Pennsylvania, the Philadelphia County Medical Society desires to express its regret at the action of the American Medical Association at New Orleans, in view of the injurious results which have followed to professional harmony and to the prospects of the International Congress.

Resolved, That the delegates from this Society be instructed to endeavor to procure such modification of that action as may best conduce to the reestablishment of professional harmony and to the success of the Congress.

The following officers were then elected for the ensuing year:

President.—Dr. R. J. Levis.

Vice-Presidents.—Drs. Wm. R. Cruice, Chas. Wittig.

Recording Secretary.—Dr. S. Solis-Cohen.

Assistant Secretary.—Dr. Benj. F. Nichols.

Corresponding Secretary.—Dr. M. S. French.

Reporting Secretary.—Dr. Wm. H. Morrison.

Treasurer.—Dr. L. K. Baldwin.

Censor.—Dr. F. P. Henry.

Librarian.—Dr. C. M. Seltzer.

NEW YORK ACADEMY OF MEDICINE.—At the annual meeting of the Academy, held on January 7th, the following were elected officers for the ensuing year:

Vice-President.—Dr. H. D. Noyes.

Corresponding Secretary.—Dr. Wesley M. Carpenter.

Treasurer.—Dr. W. F. Cushman.

Trustee.—Dr. G. A. Peters.

Committee on Admissions.—Dr. J. H. Emerson.

Recording Secretary.—Dr. A. M. Jacobus.

Committee on Library.—Dr. W. H. Katzenbach, full term; Dr. Laurence Johnson, short term.

Delegates to State Medical Society.—Drs. W. R. Birdsell, R. W. Amidon, W. E. Bullard, G. Bacon, and A. S. Hunter.

INTERNATIONAL MEDICAL CONGRESS.—Dr. R. J. Levis, of Philadelphia, having been notified recently that he was appointed a Vice-President of the Section of Surgery, has declined the position because of his conviction of the impossibility of organizing a successful Congress under the existing circumstances.

A NEW MEDICAL JOURNAL.—The first number of the *New Yorker medizinische Presse*, a monthly journal designed as a medium for the use of German-American physicians, has just been issued. It is an octavo of 48 pages, containing original articles, editorials, and reviews, and gives promise of forming a valuable addition to journalistic literature.

SANITARY INSPECTION.—The inspectors in Chicago during the first nine months of the year, made 63,264

examinations, of which 51,381 were made in places of habitation, 10,499 in factories, stores, and other places of employment, and 1384 were made according to law in new buildings in process of construction.—*St. Louis Courier of Medicine*, December, 1885.

YELLOW FEVER INOCULATIONS IN BRAZIL.—Advices from South America state that Dr. Freire, of Rio de Janeiro, has already inoculated 5000 persons in Brazil for the prevention of yellow fever, and that not one of this number has died of the disease, although the great bulk reside in centres of infection.—*Lancel*, December 19, 1885.

CREMATION IN GERMANY.—A member of the German Reichstag is stated to have tabled a petition in favor of the introduction of optional cremation. The petition bears more than 23,000 signatures, tendered in various towns and cities of the empire, among them being those of 1942 physicians, 1006 lawyers, 849 professors and teachers, 361 women, and 13 clergymen.

OPEN PRIZES OF THE MADRID ACADEMY.—The Medico-Chirurgical Academy of Spain commenced its sessions for the year on November 30th, when a paper was read by Señor Ustariz on "The Necessary Reforms in Hospitals for the Practice of Antiseptic Surgery." The subjects for the academical prizes for the next year were announced, viz.: 1. Academy Prize: What Modifications has the Panspermist Doctrine introduced in the Treatment of Internal Diseases considered or suspected to be of Parasitic Origin? 2. Señor Morales' Prize: Progress in Operations on Bones; Criticism. The first prize is 250 pesetas (\$50); the second, 750 pesetas (\$150). The essays may be written in Spanish, Portuguese, French, Italian, English, or German, and are to be sent in to the President, directed "Montera, 22 Bajo, Madrid," before September 15, 1886.

MR. ERICHSEN, of London, has been defeated in his candidacy for Parliament as the representative of the University of Edinburgh.

DR. HEYWOOD SMITH.—The conduct of Dr. Heywood Smith in reference to the girl Eliza Armstrong has been investigated by the Royal College of Physicians, who have received from him, and carefully considered, his explanations and apology; and at a general meeting of the College, held on Friday, December 18th, specially summoned to receive the report of the President and Censors on the subject, the following resolution was adopted: "The College having considered the statements made by Dr. Heywood Smith, and his apology through the Censors' Board, while acquitting him of deliberate intent to do evil, desires to put on record an opinion that he has committed a grievous error in connection with the Armstrong abduction case, which has brought discredit on himself and the profession to which he belongs. The College, therefore, regards his conduct as deserving the severest censure, and requests the President to express the views of the College, and to reprimand him accordingly." The President has accordingly addressed to Dr. Heywood Smith a severe reprimand, and warned him to be careful as to his conduct in the future.

M. MATHIAS DUVAL has been named for the Chair of Biology in the Paris Faculty, as the successor of the late M. Robin.

OFFICIAL RECOGNITION OF FEMALE PHYSICIANS.—The first official recognition of female medical practitioners has just been made by the Italian government. The recipient of this distinction is Signorina Terne, M.D., whom Queen Marguerita has appointed one of her physicians in ordinary.

HEIDELBERG UNIVERSITY.—The 500th anniversary of the foundation of the Heidelberg University will be celebrated next August. The celebration will be held in a hall specially constructed for the occasion, capable of holding 5000 persons.

THE RUSSIAN MEDICAL AUTHORITIES have sent Dr. Rapshevski to Spain to study the epidemic of cholera, and to report on the results of inoculation.

NOTES AND QUERIES.

AN UNUSUALLY LONG UMBILICAL CORD.

To the Editor of THE MEDICAL NEWS.

SIR: I saw, in THE MEDICAL NEWS of November 14, 1885, a note from A. H. Garrett, M.D., of Oswego, Kansas, under date of November 2, 1885, stating the length of an unusually long umbilical cord, and like him, thinking it might be of some interest in statistics on the subject, I will state the length of one I found in my practice recently.

On December 30, 1885, I delivered a white woman of a female child whose umbilical cord measured four feet and one-fourth inch. The cord encircled the neck three times and the body once. The mother, a multipara, stated that the labor was two weeks before term. Child weighed nine pounds. It and mother were in healthy condition and labor normal.

Respectfully,
J. C. COWAN, M.D.

MASS POINT, MISSISSIPPI,
January 6, 1886.

A VESICAL CALCULUS OF UNUSUAL SIZE.

To the Editor of THE MEDICAL NEWS.

SIR: The weight of the vesical calculus removed by me from a lad fourteen years old, and exhibited at a meeting of the New York County Medical Association December 21, 1885, is *seven ounces and four scruples*, Troy weight, and not four ounces and four scruples, as reported.

The patient is now convalescent, and will be discharged from the hospital in a few days. Please give this correction a place in your valuable journal, and oblige

Yours truly,
THEODORE R. VARICK, M.D.

JERSEY CITY, January 9, 1885.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT OF THE U. S. ARMY, FROM JANUARY 5 TO JANUARY 11, 1886.

MCPARLIN, THOMAS A., *Colonel and Surgeon*.—Now awaiting orders in New York City, ordered for assignment to duty as Medical Director, Department of the Platte, on January 24, 1886.—S. O. 5, A. G. O., January 7, 1886.

GODDARD, CHARLES E., *Major and Surgeon*.—Died at Fort Yates, Dakota Territory, January 4, 1886.

MUNN, CURTIS E., *Captain and Assistant Surgeon*.—Ordered from Department of the East to Department of Columbia.—S. O. 4, A. G. O., January 6, 1886.

SHANNON, WILLIAM C., *Captain and Assistant Surgeon*.—Ordered from the Department of the Platte to the Department of the East.—S. O. 4, A. G. O., January 6, 1886.

MCCAW, W. D., *First Lieutenant and Assistant Surgeon*.—Relieved from duty at Fort Lyon, Colorado, and ordered for duty at Fort Leavenworth, Kansas.—S. O. 1, Department of Missouri, January 4, 1886.

SWIFT, EBENEZER, *Lieutenant-Colonel* United States Army (retired).—Died near Hamilton, Bermuda, December 24, 1885.